## **EXHIBIT 4**

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Page 1
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               UNITED STATES DISTRICT COURT
             IN AND FOR THE DISTRICT OF WYOMING
 2
 3 STEPHANIE WADSWORTH,
   individually and as

Parent and Legal

Guardian of W.W., K.W.,

2:23-cv-
 4 Parent and Legal
                                    2:23-cv-00118-NDF
   G.W., and L.W., minor
    children, and MATTHEW
   WADSWORTH,
 6
 7
         Plaintiffs,
 8
   v.
   WALMART, INC. and JETSON
    ELECTRIC BIKES, LLC,
10
         Defendants.
11
12
13
                      ORAL DEPOSITION OF
14
                 DEREK A. KING, M.S., P.E.
15
                   MONDAY, AUGUST 19, 2024
16
17
18
19
20
21
22 REPORTED BY:
23 DEBRA A. DIBBLE, FAPR, RDR, CRR, CRC, Notary Public
24 California CSR 14345
25 JOB NO. 44990
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Page 2
         ORAL DEPOSITION OF DEREK A. KING, M.S., P.E.,
 1
 2 produced as a witness at the instance of the
 3 Defendant Jetson Electric Bikes, LLC, and duly
 4 sworn, was taken in the above-styled and numbered
 5 cause on the above-referenced date, from 9:38 a.m.
 6 to 3:46 p.m. PDT, before Debra A. Dibble, CSR, CCR,
 7 RDR, CRR, Fellow of the Academy of Professional
 8 Reporters and California CSR 14345, reported by
 9 realtime stenographic means at the Doubletree
10 Berkeley Marina, 200 Marina Boulevard, Berkeley,
11 California, pursuant to the Federal Rules of Civil
12 Procedure.
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25
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1 A P P	EARANCES:	1 3.50
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                   PROCEEDINGS
 2
              August 19, 2024, 9:38 a.m. PDT
 3
                 DEREK A. KING, M.S., P.E.,
 5
              having been first duly sworn,
 7
                   testified as follows:
 8
                        EXAMINATION
 9
10 BY MR. LAFLAMME:
             Dr. King, my name is Eugene LaFlamme.
        0.
12 met quickly off the record. In fact, I think we met
13 back in February or so, whenever we were out at your
14 location as well, correct?
15
        Α.
              Yeah.
        0.
              I represent the defendants in this case.
17 You understand that you have been presented as an
18 electrical battery expert in this case, correct?
19
       Α.
              Yeah.
20
              I understand you've had your deposition
21 taken before, as I have your testimony list. And it
22 looks like over the past, I don't know how many
23 years this goes back, three or four years, about six
24 depositions?
25
        Α.
              Sounds right.
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Page 8 Since you are familiar with the process, 1 Q. 2 I won't belabor all of the traditional five minutes 3 of instructions that we go through for witnesses, 4 unless you want me to. But the -- I did want to get 5 a couple out, the most important two, from my 6 perspective, are making sure that we're 7 communicating. So if you don't understand one of my 8 questions, don't hear it for whatever reason, let me I will rephrase it or have it read back, 10 whatever is appropriate in the circumstances. Okay? Yep. Sounds good. 11 Α. If you answer a question as worded, we're 12 Q. 13 going to presume that you are doing your best to 14 give an honest answer to that question. 15 Fair enough? 16 Α. Yes. 17 All right. Could you please state your Ο. 18 full name for the record? 19 Derek Arthur King. Α. 20 Q. And where are you currently employed? Berkeley Engineering and Research. 21 Α. For simplicity purposes, are you okay if 22 Q. 23 I call it BEAR? Yes, please. 24 Α. 25 MR. LAFLAMME: And, Debbie, that's

Page 9 all capitalized, B-E-A-R. 1 2 BY MR. LAFLAMME: What is your position at BEAR currently? 3 Ο. Α. Engineer. 5 Q. And any particular designation for 6 engineer? 7 Α. No. 8 Q. Or is engineer the title? That's it. 9 Α. 10 Ο. All right. How many engineers total are 11 at BEAR? Six, I believe. 12 Α. And how many employees total are at BEAR? 13 Q. I'd say nine, maybe ten. 14 Α. So fair to state that the additional 15 Q. 16 three to four employees, are they on the admin side? 17 Α. Yes. When were you first hired on this case? 18 Ο. 19 Α. For this case? I actually don't 20 remember. Yeah, I don't recall when we were 21 retained. Do you recall that we had a lab 22 Q. 23 inspection at your location, I think it was in --24 was it in February of this year? 25 Α. Yes.

- 1 Q. How long before that lab inspection had
- 2 you been retained?
- 3 A. I would estimate six months, but...
- 4 that's just an estimate. I think we could look at a
- 5 retainer document to get a specific date.
- 6 Q. And that was not in your file, which is
- 7 why I'm asking this.
- 8 A. Oh, sorry.
- 9 Q. That's all right. So you think it was
- 10 about six months prior to the lab inspection at your
- 11 location?
- 12 A. I believe so. Approximately.
- 13 Q. So that would be sometime, third or
- 14 fourth quarter or so, of 2023?
- 15 A. Yeah. I feel like it was possibly in the
- 16 summer. Summer of 2023.
- 17 Q. Is there anyone else from BEAR that has
- 18 worked on this case, the Wadsworth case, besides
- 19 you?
- 20 A. Yeah. I discussed the case with other
- 21 people. Yeah.
- Q. When you say you've discussed the case,
- 23 are those just general discussions about the case or
- 24 were they actually doing substantive work on this
- 25 file as well?

- 1 A. General discussions.
- 2 Q. And who else would you have had those
- 3 general discussions with?
- 4 A. That would be David Rondinone.
- 5 Q. Can you spell Rondinone?
- 6 A. Yes, Rondinone is R-O-N-D-I-N-O-N-E.
- 7 Yeah. Also, probably with Glen Stevick
- 8 as well as Rong Yuan, R-O-N-G, Y-U-E-N, I believe.
- 9 O. Anyone else?
- 10 A. I don't think so.
- 11 O. It sounds like David Rondinone would have
- 12 been the person that you would have talked to the
- 13 most out of the three on this case? Or is that not
- 14 accurate?
- 15 A. No, I -- in terms of volume and
- 16 discussion, probably Rong, the most.
- 17 Q. And did any of these three individuals
- 18 that you spoke with at BEAR have any input in your
- 19 report that you have issued in this case?
- 20 A. No input other than like an editing
- 21 review.
- 22 Q. So at least as far as the substantive
- 23 work that BEAR has done on this case, it sounds like
- 24 that has been done by you, correct?
- 25 A. Yes.

Page 12 And then these other three individuals 1 Q. 2 that you've had some general discussions with about 3 this case, they've been general or related to 4 editing of your report? 5 Α. Right. And when we discuss editing of the Ο. 7 report, that isn't substantive editing, more 8 stylistic or typographical-type editing? That's right. 9 Α. 10 (King Deposition Exhibit 69 marked.) 11 BY MR. LAFLAMME: Mr. King, I'm going to show you what's 12 Q. 13 been marked as Exhibit 69. And this is a copy of 14 the testimony list that was provided. 15 How far back does this testimony list go? 16 Α. It says 2022. And understanding that the last date is 17 Ο. 18 2022, do you have depositions and court testimony 19 that would go back further in time? 20 Α. No. 21 Ο. No? 22 Α. No. Okay. So the testimony list that we're 23 Q. 24 looking at here, this is all-encompassing for your 25 deposition and trial testimony for your career at

Page 13 1 BEAR? Α. Yes. And in looking at your testimony list for Ο. 4 the six depositions that you have given, do any of 5 these relate to a fire case? MR. AYALA: Form. Α. No, they don't. 8 BY MR. LAFLAMME: Okay. And let me just clean that up a 10 little bit. Do any of the depositions that you have 11 given for your career at BEAR, do any of them 12 involve any issues related to one of the products 13 allegedly starting a fire? 14 Α. No. 15 Q. And I do see there is a Future Motion 16 claim on here. Zinetti, Z-I-N-E-T-T-I, is the 17 plaintiff? 18 Do you see that? 19 Α. Yes. 20 Q. And Future Motion is Onewheel. Right? 21 Α. Right. Was that a nose-down issue? 22 Q. Yes. 23 Α. 24 And nose-down meaning when you're riding Ο. 25 the Onewheel, the front end goes down and someone

Page 14 1 catapults off? Α. Right. Q. Do any of the depositions that you have 4 given relate at all to any cases that would involve 5 an allegation of lithium-ion battery failures? Α. No. Ο. And the Onewheel case, the Future Motion 8 matter, that was a case you had with Morgan & 9 Morgan, correct? 10 Α. Yes. Have you had other cases with Morgan & 11 Ο. 12 Morgan? Yes. 13 Α. 14 How many other cases have you had with Ο. 15 Morgan & Morgan? Α. Probably in the dozens. 16 Dozens, plural? 17 Q. 18 Α. Yes. 19 Ο. Meaning 24 or more? 20 Α. Yes. Likely. I should clarify, that's for -- that 21 22 would be for BEAR as a whole, not necessarily 23 myself. Okay. Understood. I appreciate that Ο. 25 clarification.

- 1 So for BEAR as a whole, in their work
- 2 with Morgan & Morgan, it's been somewhere in the
- 3 neighborhood of 24-plus cases?
- 4 A. Yes.
- 5 Q. And then how about for you individually?
- 6 A. A few. Maybe five.
- 7 Q. For any of the other five or so cases
- 8 that you have personally worked on with Morgan &
- 9 Morgan, have any of them involved an allegation of a
- 10 product failure that involved a fire?
- 11 A. I don't believe so.
- 12 Q. How many cases have you handled in your
- 13 career that involved an allegation of a product
- 14 failure that resulted in a fire?
- 15 A. So I've been involved through working
- 16 with the other engineers in, I would say, dozens of
- 17 fire-related cases.
- 18 Q. How many in which you are the named
- 19 expert from BEAR on a case involving a fire claim?
- 20 A. Approximately three to five.
- 21 Q. And what were the products involved in
- 22 those cases?
- 23 A. One was a -- possibly a refrigerator and
- 24 related wiring. Another was -- actually, another
- 25 refrigerator. Another was batteries in a boat.

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Page 16
              Another was -- I believe it was -- it was
 1
 2 in a dry cleaner. We actually didn't get very far
 3 in that investigation, so...
              So for the other fire claims in which you
 5 have been the identified expert, or the primary
 6 engineer from BEAR, we have two refrigerator cases,
 7 one battery -- or marine battery case, and then a
 8 case at a dry cleaner facility?
                    There was another one.
        Α.
              Yes.
10 appliance -- appliance and wiring at a house.
              What type of appliance?
11
        O.
              That wasn't -- we -- that wasn't clear.
12
        Α.
13 We didn't get very far in that investigation.
              Fair to state that you have never been
        Ο.
15 the primary expert or an identified expert by a
16 party that is claiming that there was a lithium-ion
17 battery failure that caused a fire?
        Α.
18
              Correct.
19
              We'll mark your CV as 70.
        0.
20
                  (King Deposition Exhibit 70 marked.)
21 BY MR. LAFLAMME:
              There you go, Mr. King.
22
        Q.
23
              Mr. King, I've handed you what's been
24 marked as Exhibit 70, which is a copy of the CV that
25 was produced in this case. And it looks like you
```

- 1 started at BEAR back in 2009, correct?
- 2 A. Yes.
- 3 Q. You have your education listed, BS from
- 4 UC Berkeley. What date was that or what year?
- 5 A. That was 2009.
- 6 Q. And then you got an MS in electrical from
- 7 Ohio University. What year was that?
- 8 A. 2020.
- 9 Q. And what have been your various jobs at
- 10 BEAR? Understanding you're currently an engineer;
- 11 what did you start out as?
- 12 A. Engineer.
- 13 Q. Okay. So you've had the same job title
- 14 since you started in 2009?
- 15 A. Yes.
- 16 Q. When did you start doing expert witness
- 17 work to the extent that you were the named expert by
- 18 parties?
- 19 A. That would be maybe -- maybe around 2020.
- Q. Okay. And prior to 2020, would you have
- 21 been more in the assistive-type role?
- 22 A. Yes.
- Q. When you got your electrical engineering
- 24 degree from Ohio University, did you go back to --
- 25 or did you go to Ohio for a couple of years in

Page 18 1 person or was that online? Online. Α. And how long did it take you to complete Ο. 4 that degree? Α. I think it was two and a half years. 6 Yeah. Ο. Did any of it involve in-person at Ohio 8 U? 9 Α. No. 10 Ο. And prior to your work at BEAR, it looks 11 like you did some work with a company called 12 Berkeley Engineering and Research Inc. That is BEAR. 13 Α. 14 Oh, I'm sorry. I read that wrong. Ο. 15 You did some work at Lawrence Berkeley 16 National Laboratories. 17 Α. Oh, yes. That was an internship that 18 turned into a part-time job. 19 And when were you at Lawrence Berkeley? 0. 20 Α. I believe 2007 and '8, approximately. So this would --21 Ο. 22 Sorry, go ahead. Α. Approximately. 23 24 So this would have been -- you would have Ο.

25 started there when you were in undergrad at

Page 19 1 UC Berkeley? Α. Yes. And then I think you -- which is probably Ο. 4 why you couched it as an internship, correct? 5 Α. Mm-hmm. (Witness nods.) Did --6 Ο. Yes. Yes, that's how it started. Α. And then it looks like it then went -- or Q. 9 became an assistant engineer position, correct? 10 Α. Yes. Yes, it did. Was the assistant engineer designation, 11 O. 12 was that given to you before or after you graduated 13 UC Berkeley? We're still talking about at Lawrence? 14 Α. 15 Q. At Lawrence, correct. 16 Α. I was not at Lawrence after I graduated. 17 So that -- so the internship was a three-month, 18 approximately, two to three months for the summer. 19 And then I was hired on to stay. 20 So how long in total was your position 21 with Lawrence Berkeley? It was about a year, year and a half. 22 Α. So towards the end of your undergrad it 23 Ο. 24 sounds like you got a summer internship there, and 25 then that led to a part-time assistant engineering

Page 20 1 job during -- was it your last year of school? Α. Yeah. And then once you graduated from Ο. 4 UC Berkeley, that's when you went to work for BEAR? 5 Α. Yes. Was that job at BEAR, was -- did you have Ο. 7 any jobs in between BEAR and the time you graduated 8 UC Berkeley? 9 Α. No. 10 So it sounds like, for all intents and Ο. 11 purposes, for your professional career, it has 12 always been at BEAR? 13 Α. Yes. Have you ever -- or strike that. 14 15 You haven't ever worked for a company 16 that designs or manufactures lithium-ion battery 17 products, correct? 18 Α. Correct. 19 And you have never personally designed or 20 manufactured a lithium-ion battery product, correct? 21 Α. Correct. And you have never been involved in the 22 Q. 23 design or manufacture of a lithium-ion battery pack, 24 correct? 25 Α. Correct.

Page 21 Are you a member of any professional 1 Q. 2 organizations? Α. No. 3 Ο. And I know you -- on your CV you have the 5 PE designation. When did you get that? I believe that was in -- I think that was Α. 7 in the fall of 2023. 8 Q. So approximately a year ago is when you 9 got your PE designation? 10 Α. Yeah. 11 And where are you licensed as a PE? Q. California. 12 Α. Any other states? 13 Ο. 14 Α. No. 15 Q. And I take it you have never been on a --16 any of the UL technical committees? 17 Α. Correct. You haven't been on any of the NFPA 18 O. 19 technical committees? 20 Α. Correct. No ANSI technical committees? 21 Ο. Α. Correct. 22 23 And really, no technical committees of Q. 24 any standard-issuing organization, correct? 25 Α. Correct.

Page 22 1 In the Lawrence Berkeley National Q. 2 Laboratories business, I just pulled them up quickly 3 online. It looks like their focus was on 4 environmental issues and energy efficiency issues? For the project I worked on, yes. And was the project that you worked on --Ο. 7 it looks like it was related to energy loss in 8 residential hot water systems? 9 Α. Yes. 10 So basically trying to figure out how to Ο. 11 have the system hold or maintain hot water longer? 12 Α. Yes. What is the rate that you charge for your 13 Q. 14 work in this case? 15 Α. BEAR charges, I believe it's 200 an hour 16 for my work, and they charge 350 an hour for 17 testimony. Q. Did you say 350? 18 19 Α. Yes. 20 Q. So 200 an hour for your forensic work, 21 correct? Yes. 22 Α. And then the 350 per hour for testimony, 23 Ο.

24 that would be, number one, what we're doing here

25 today, right?

Page 23 1 Α. Yes. Q. And is it the same charge for trial 3 testimony? Α. Yes. Q. Do you know how much you have billed to 6 date on this case? Α. I don't. Q. Has BEAR generated any invoices for their 9 work on this case? 10 Α. Probably. I would assume over the course 11 of being retained that they have. That wasn't in your expert file. Is that 12 Q. 13 something you have access to? 14 I can request it. Α. 15 Q. So for items related to your work in this 16 case that weren't in your expert file but it sounds 17 like you have access to would be, number one, the 18 retainer agreement. Right? 19 MR. AYALA: I think that was in 20 there, Eugene. 21 MR. LAFLAMME: Was it? 22 MR. AYALA: Yeah, I think so. 23 MR. LAFLAMME: Certainly possible I 24 missed it. MR. AYALA: In that first subfolder 25

```
Page 24
 1
         under BEAR Administrative, or -- I think
         that's the label.
                  MR. LAFLAMME: All right.
 3
                  MR. AYALA: If not --
                  MR. LAFLAMME: I'll take a look on a
 5
         break.
 6
 7
                  MR. AYALA:
                              Sure.
 8
                  MR. LAFLAMME: If we can go off the
         record quickly, Debbie.
 9
10
                  (Discussion off the record.)
11 BY MR. LAFLAMME:
              So I may have gotten the retainer
12
        Q.
13 agreement. I'll take a look at that, and if I did,
14 that's my fault.
15
              And it sounds like there would be
16 invoices, though, that wouldn't have been part of
17 the expert file, correct?
18
        Α.
              Right.
19
              And that, you -- I assume you just have
        0.
20 to put a request in to whomever your admin is and
21 they can pull it and circulate it?
22
        Α.
              Yes.
              Okay. I would ask that you, after your
23
        Ο.
24 deposition, you do that, and Rudy and I will get in
25 contact to get that circulated.
```

Page 25 1 Α. (Witness nods.) Do you know what the total amount or Q. 3 total hours are that you put -- have put into this 4 case thus far? 5 Α. No. Have you ever had a prior case involving Ο. 7 a hoverboard in which you were the primary expert? 8 Α. No. Have you ever had a prior case involving 10 a hoverboard in which you were just working on it in 11 an assistive role? A small amount, yes. Yes. 12 Α. Okay. What do you mean by small amount? 13 Ο. 14 A few hours, assisting with some testing. Α. 15 Q. So it sounds like there was one other 16 file that BEAR had where a hoverboard was involved 17 in one respect or another and you assisted for a 18 couple of hours with some testing. 19 MR. AYALA: Form. 20 BY MR. LAFLAMME: 21 Ο. Is that accurate? That's correct. 22 Α. Do you know what type of hoverboard that 23 Q. 24 was? 25 I would be guessing. Α. No. No.

Page 26 Was the issue with the hoverboard for the Q. 2 prior case that you had a small assistive role in, 3 did it relate to any fire issues with the 4 hoverboard? Α. Yes. And what was your involvement in that O. 7 testing? 8 Α. I discussed with Rong the type of testing 9 and data together on an exemplar. 10 Ο. Okay. So it sounds like with -- is it 11 Rong? Is that what you said? 12 Yes. Α. With your coworker Rong, he was looking 13 O. 14 at an exemplar hoverboard? 15 Α. Yeah. She had a --16 Q. Sorry, she. 17 Α. She had some exemplars to be tested, yes. And what was your involvement in the 18 Ο. 19 actual test process?

- 20 A. We discussed how to physically connect
- 21 data acquisition to the hoverboard while it could
- 22 still be ridden.
- Q. So was your role with respect to that
- 24 other case with Rong identifying a way for data
- 25 extraction from the exemplar?

Page 27 1 Α. Yes. Q. And was that the -- was that the only 3 role that you played with respect to that other 4 hoverboard case with Rong? 5 Α. Yes. Ο. And I assume you weren't named as an 7 expert in that case, correct? 8 Α. Correct. Do you know if any of your opinions have 10 ever been limited or stricken in any manner by a 11 judge? There -- I believe so. I'm not aware of 12 Α. 13 the details. 14 Okay. Do you know the name of the case Ο. 15 or cases in which that occurred? 16 Α. Possibly Ibarra, I-B-A-R-R-A.

- Q. And what happened with that case?
- 18 A. I don't really know the details.
- 19 Q. Was that Jason Ibarra versus Future
- 20 Motion case?
- 21 A. Yes.
- 22 Q. Okay. And that was the -- a case out of
- 23 the Southern District of Florida?
- 24 A. That sounds correct.
- Q. And as far as what the decision was in

Page 28 nions

- 1 that case, do you know to what extent your opinions
- 2 were limited?
- 3 A. I don't.
- 4 Q. How was it that you became aware that
- 5 your opinions were limited in the Ibarra case?
- 6 A. I had some conversation with an attorney
- 7 who -- he suggested that that had occurred, but he
- 8 didn't have any details for me, so...
- 9 O. Have you ever reviewed the case decision
- 10 related to your testimonies that were limited in
- 11 that case?
- 12 A. No.
- Q. And who were you working for on that
- 14 case? What law firm?
- 15 A. I don't recall the names. I think I
- 16 would remember them if you had them, but...
- 17 Q. There's a couple names. Abraham
- 18 Karger -- or, sorry, Aaron Karger?
- 19 A. That sounds familiar. I think so.
- 20 Q. Or Jeffrey Weiskopf?
- 21 A. Yes.
- 22 Q. They both sound familiar?
- 23 A. Yes.
- Q. Okay. So you are aware of that case in
- 25 which your opinions were limited by the Southern

Page 29 1 District of Florida; you just don't know in what 2 respect? A. Yeah. So it's kind of hearsay to me, 4 but... Ο. How about the Moore v. National Presto 6 Industries case in the Western District of 7 Wisconsin? Are you familiar with that case? Α. That sounds like a -- yes, a pressure 9 cooker, I believe. 10 0. And are you aware that the Court granted 11 summary judgment in -- well, as one of the reasons 12 citing that your opinions were not based on 13 sufficient facts/data, and that you didn't use 14 reliable methods? 15 MR. AYALA: Form. 16 Α. I was not aware of that. 17 BY MR. LAFLAMME: O. Were you advised about the Moore v. 18 19 National Presto Industries case in the Western 20 District of Wisconsin regarding the Court's review 21 of your opinions in that case? 22 Α. No. And you haven't ever read that case? 23 Q. 24 Α. No. 25 Q. How about

Page 30 1 Bettencourt v. SharkNinja Operating, are you aware 2 of that case? Α. Yes. Are you aware that your -- three of your 5 five opinions were excluded in that case? That sounds familiar. I don't recall the Α. 7 count. Q. Are you aware that in the Bettencourt 9 case, one of the opinions that was excluded was your 10 FMEA opinions? 11 Α. Yes. And you have issued some FMEA-related 12 Q. 13 opinions in this case as well, correct? 14 Α. I believe so, yes. 15 Q. You are -- you would agree that you are 16 not an origin and cause expert, correct? 17 Α. Correct. And I understand you do not have your CFI 18 Ο. 19 or CFEI designation? 20 Α. Correct.

- Do you know what those designations are? 21 O.
- Only that they relate to investigating 22 Α.
- 23 cause and origin of fires.
- 24 And you are not offering any origin Ο.
- 25 opinions in this case, correct?

Page 31 1 Α. No. And you are relying on Mr. Schulz in this Q. 3 case for his origin opinion as to where the fire may 4 have started, correct? Schulz, or any other -- any other 6 investigators. I don't recall the different 7 investigators and roles specifically. Needless to say, you do not have any 8 Q. 9 opinions in this case as to the origin of the fire, 10 correct? 11 Α. Right. And you do not intend to testify at trial 12 Q. 13 as to any issues related to the origin of the fire, 14 true?

- 15 A. Correct.
- MR. AYALA: Just object to the form
- 17 of that question.
- 18 BY MR. LAFLAMME:
- 19 Q. You did not do an origin investigation,
- 20 correct?
- 21 A. Correct.
- 22 Q. You were not at any of the site
- 23 inspections, correct?
- A. Correct.
- Q. Do you know what NFPA code applies to

Page 32 1 origin investigations? Α. No. And just to clear up any objections, you Ο. 4 are not offering an origin opinion in this case at 5 all, correct? Α. Correct. (King Deposition Exhibit 71 marked.) 8 BY MR. LAFLAMME: Sir, I'm going to show you what's been 10 marked as Exhibit 71. 11 And could you describe what 71 is? 71 is a document summary. 12 Α. And what does that mean? This was one of 13 Ο. 14 the documents within your expert files. 15 Α. This is a -- I'll call it a high-level 16 summary of what the documents contain, what 17 information is in the documents that we were 18 provided at the time. Q. So what is the date that this summary is 20 put together? I don't know the date that this was 21 Α. 22 started or the last time I edited this. Is this something that you start when you 23 Q. 24 receive an assignment? 25 A. It would be when we received materials,

- 1 so there's probably a date for when we received --
- 2 started receiving documents.
- 3 Q. And does this document summary, does this
- 4 cover all of the documents that you have received in
- 5 this case?
- 6 A. This summary does not have any
- 7 information on depositions.
- 8 Q. Okay. What depositions have you reviewed
- 9 in this case?
- 10 A. There were -- there was a -- I believe a
- 11 Walmart representative. I believe there was a
- 12 Jetson representative. And I briefly reviewed the
- 13 Sheaman deposition.
- I have just received some depositions of
- 15 the family, but I haven't had the -- really had a
- 16 chance to review those.
- 17 Q. Okay. When did you obtain the Sheaman
- 18 dep transcript?
- 19 A. I believe that was Friday.
- 20 Q. So after you issued your report?
- 21 A. Yes.
- 22 Q. Have you reviewed the whole Sheaman dep
- 23 transcript?
- A. I would say no.
- Q. It was a pretty lengthy one.

Page 34 1 Α. It was. All right. So you looked at part of it Q. 3 over this weekend? Α. Skimmed it, yeah. How much of it did you read? 5 Q. Α. Not much. 7 And then did you say the Wadsworth family Ο. 8 or the Wadsworth father? 9 Α. Family. 10 Q. So Mr. and Mrs., and the four children? Yes, I believe that's what's in there. 11 Α. 12 Did you receive that on Friday as well? Q. Yes. 13 Α. 14 And it sounds like you have not reviewed Ο. 15 those dep transcripts yet? Α. 16 No. Any other dep transcripts that you have 17 18 received in this case? 19 Α. No. 20 Q. Did you review the Walmart and Jetson 21 corporate rep depositions? 22 Α. Yes. When you do that, do you take notes on 23 Q. 24 the transcript? 25 Α. Yes.

- 1 Q. Where are those notes located now?
- 2 A. Those are in the file. They should be in
- 3 a similar folder as the depositions.
- 4 O. Do you know what folder it would be in?
- 5 I didn't see them in the file, but perhaps I missed
- 6 them.
- 7 A. Possibly the -- there should be a
- 8 materials folder with a date. And inside, I believe
- 9 it was a second materials folder, there should be
- 10 the depositions and the summary files for those.
- 11 Q. So when you take notes on the
- 12 depositions, is there a similar type summary
- 13 document created? Or what is your process for that?
- 14 A. Yeah, for the deposition, I create a
- 15 separate summary file.
- 16 Q. Do you actually make markings on the
- 17 deposition itself or are those just put into a Word
- 18 document for your notes?
- 19 A. Just a Word document.
- 20 Q. And have you started a deposition summary
- 21 file for Sheaman's deposition?
- A. Not yet.
- 23 Q. So for any deposition transcript summary
- 24 file, I mean your notes, it would just be the
- 25 Walmart or Jetson corporate rep?

Page 36 1 Α. Yes. So looking at Exhibit 71, the first Q. 3 document references the complaint. You see that, 4 correct? Α. Yes. And then there's four bullet points, so O. 7 to speak, below that. Are those just your summary 8 of some of the significant facts that are included 9 in the complaint? 10 Α. Yes. And then the next category is highlighted 11 Ο. 12 Sweetwater County Sheriff's report, correct? 13 Α. Yes. 14 And one of the, then, six bullet points Ο. 15 that you have below that is: Hoverboard constantly 16 in use and plugged in several times per day. Outlet 17 where hoverboard charged at location found during 18 investigation. 19 Do you see that? 20 Α. Yes. The hoverboard was not charged --21 or was not plugged in at the time of the fire, 22 correct? 23 MR. AYALA: Form. 24 I'm not aware specifically. Α. 25

- 1 BY MR. LAFLAMME:
- Q. Okay. You do not know if the hoverboard
- 3 was plugged in or not at the time of the fire?
- 4 A. I don't know. No, I don't know for sure
- 5 either way.
- 6 Q. Did you review the CT scans in this case?
- 7 A. Yes.
- 8 Q. And you are aware that on the CT scans,
- 9 you can zoom in to the three-pin plug, the
- 10 receptacle that the charger would plug into on the
- 11 hoverboard, correct?
- 12 A. Yes.
- 13 Q. There's no evidence or physical
- 14 indication that the hoverboard was plugged in based
- 15 on what you see on the CT scans for that three-pin
- 16 receptacle, correct?
- MR. AYALA: Form.
- 18 A. I wouldn't expect there to be either way.
- 19 I mean, we received the evidence with no -- with
- 20 nothing plugged in, so nothing would be there on the
- 21 CT.
- 22 BY MR. LAFLAMME:
- 23 Q. You agree that when the hoverboard was
- 24 found on-site, it was not plugged in, correct?
- MR. AYALA: Form.

- 1 A. I guess I would need to review photos of
- 2 what people took to check that.
- 3 BY MR. LAFLAMME:
- 4 O. You have not been made aware of any
- 5 charger that was located in the vicinity of the
- 6 hoverboard, correct?
- 7 A. Correct. I haven't seen one.
- 8 Q. And you haven't seen any remnants of a
- 9 charger located in the area of the hoverboard,
- 10 correct?
- 11 A. Correct.
- 12 Q. And you're not aware of any evidence,
- 13 testimony or other physical evidence that says that
- 14 the hoverboard was plugged in at the time of the
- 15 fire, correct?
- 16 A. No, I think I would want to review the
- 17 photos for that specific detail.
- 18 Q. Okay. But as you sit here today, you
- 19 cannot point to any testimony, photographs, or other
- 20 physical evidence that suggests that the hoverboard
- 21 was plugged in at the time of the fire, correct?
- MR. AYALA: Form.
- 23 A. Yeah, as I sit here.
- 24 BY MR. LAFLAMME:
- Q. Okay. And you understand that you are

Page 39 1 being presented for your discovery deposition today 2 to find out all of the information and opinions that 3 you have based on your investigation in this case, 4 correct? Α. Yes. And based on the totality of your Ο. 7 investigation, you are not aware of any testimony, 8 photographs, or other physical evidence that 9 suggests that the hoverboard was plugged in at the 10 time of the fire, correct? Α. Not at this time. 11 Going back to Exhibit 71, the third line 12 Q. 13 item is a -- or third category is Public 14 Investigative Report, and then it references 15 Sweetwater County Sheriff's Report. 16 Is that basically just a repeat of the 17 category above? 18 Α. Yes. 19 All right. And then the next category is Ο. 20 Evidence, and one of them is Info From Cristal 21 VanDongen? I'm not sure if I'm saying that 22 correctly, but it's V-A-N, capital D-O-N-G-R-E-N 23 [sic].

Do you see that?

25 A. Yes.

Page 40 Did you speak -- have you spoken with 1 Q. 2 Cristal in this case? Α. 3 No. Ο. In your report you reference that 5 Cristal was not able to rule out a fire originating 6 outside of the house, correct? Α. Yes. How did you get that information? I believe that is in whatever this note Α. 10 or document contains. So at some point or in one form or Ο. 12 another, through your investigation, you learned 13 that Cristal VanDongen was retained as an origin and 14 cause expert by Farmers, who was the property 15 insurer, correct? I wasn't aware of her retained role. 16 Α. 17 O. You're aware that she's an origin and 18 cause expert, correct? 19 I was not. I had very little information Α. 20 on her. You were at least told that Cristal, in 2.1 Ο. 22 whatever extent she investigated the fire, could not 23 rule out a fire originating outside the house, 24 correct? 25 Α. Yes.

Page 41 And it sounds like you never spoke with 1 Q. 2 Cristal to determine why that was, correct? Α. Correct. 3 Ο. Have you spoken with any of the 5 individuals that have investigated this fire --6 that's a poor question. Let me take a step back. 7 Have you spoken with an individual named 8 John Palmer? 9 Α. No. 10 Ο. Do you know who John Palmer is? No. The name sounds familiar. 11 Α. Are you familiar -- does the name sound 12 Q. 13 familiar from -- he's an electrical engineer with 14 Palmer Engineering and Forensics in Salt Lake City. 15 Does that ring a bell? 16 Α. No. 17 Ο. But regardless, you've never spoken to 18 John Palmer in this case, correct? 19 Α. Correct. 20 Q. Scott Cramer, with EDT, another 21 electrical battery investigator; have you ever 22 spoken with him? 23 Α. No. 24 Are you familiar with what Scott Cramer, Ο.

25 C-R-A-M-E-R, what his role has been in the

Page 42 1 investigation in this case? Α. No. You are not aware that at one point he 0. 4 was retained by the Wadsworth family to help with 5 the investigation? Α. No. How about a Daren Slee, S-L-E-E, with Ο. 8 ESI, another electrical battery expert; are you 9 familiar with him? 10 Α. No. Did you ever -- you never spoke with 11 O. 12 Mr. Slee, I presume, correct? 13 Α. Correct. 14 And you never spoke with Mr. Cramer, Ο. 15 correct? 16 Α. Correct. And when I say spoke with, I'm -- I 17 Q. 18 should be a little more broad. You've never 19 communicated with Mr. Cramer on this case, correct? 20 Α. Correct. And you've never communicated with 21 Q. 22 Mr. Slee on this case, correct? Α. Correct. 23 24 And are you aware that Mr. Slee was Ο. 25 another electrical battery expert that was

Page 43 1 previously retained by the Wadsworth family? Α. I was not. And you have never communicated with Ο. 4 Mr. Palmer, another electrical expert? 5 Α. Correct. How about a Smokey Dyer, D-Y-E-R? Ο. 7 that name familiar to you? 8 Α. No. And I assume you have never communicated 10 with Smokey Dyer on this case? 11 Α. Correct. And you are not aware that Mr. Dyer is an 12 Q. 13 origin and cause expert that was previously retained 14 by the Wadsworths? 15 Α. I was not aware. 0. Are you aware of any other experts that 17 assisted in the investigation into the cause of this 18 fire on behalf of the Wadsworth family other than 19 you and Mr. Schulz? 20 Α. No. So you have not been told about the other 21 Ο. 22 consultants that have been retained on behalf of the 23 Wadsworths at some point in time during this

25 A. Correct.

24 investigation?

```
Page 44
              Is the first time you're learning that
 1
        Q.
 2 today?
        Α.
              Yes.
 3
        Ο.
              Have you ever spoken with Mr. Schulz in
 5 this case?
        Α.
              No.
        O.
              It's S-C-H-U-L-Z.
              Have you worked with Mr. Schulz
 9 previously?
10
        Α.
              No.
              Have you ever spoken with any of the
        Q.
12 local investigators that were involved in the origin
13 and cause investigation?
14
        Α.
              No.
15
        Q.
             Meaning Detective Sheaman?
        Α.
16
              No.
              Never communicated with Detective
17
        Q.
18 Sheaman?
19
        Α.
              No.
20
        Q.
              Have you ever communicated with a Fire
21 Chief Robinson?
22
              No.
        Α.
23
              How about a Fire Chief Erdmann?
        Q.
24
        Α.
              No.
25
              So it sounds like with respect to your
        Q.
```

Page 45 1 investigation in this case, you have not spoken with 2 any of the other individuals that have been involved 3 in this investigation in one form or another? Α. Correct. And you haven't communicated with any of Q. 6 them either? Α. Correct. Q. Going back to Exhibit 71 under the 9 Evidence category, then there's the Nuttall Evidence 10 Log 1 and 2. Do you see that? 11 Yes. 12 Α. And then on -- this may just be a typo, 13 Ο. 14 but under Evidence Log 1, there's then a 1 in 15 parentheses. Does that mean anything? That's -- I don't -- I don't know of 16 Α. No. 17 any meaning to that. I mean, there's not a sub 1 or sub 2 of 18 0. 19 that evidence log that you are aware of? 20 Α. Not that I'm aware. The Nuttall Evidence Log No. 1, that is 21 0. 22 the -- listed as the fire-damaged hoverboard,

24 A. Yes.

23 correct?

Q. And that is -- is that the only physical

Page 46 1 evidence that you have looked at from the fire scene 2 in this case? 3 Α. Yes. MR. AYALA: I'm going to object to the form of that question. 6 BY MR. LAFLAMME: Have you looked at any other physical 0. 8 evidence in this case besides the fire-damaged 9 hoverboard that was removed from the Wadsworth 10 residence? 11 Α. Not in person. And then, the Nuttall Evidence Log No. 2, 12 Q. 13 that includes a number of other items of evidence, 14 and that is not evidence that you have physically 15 looked at in person, correct? Α. 16 Correct. 17 Going down to the next category in Ο. 18 Exhibit 71, Inspections. And then there's the 19 Public Investigative Report. Is that, again, just 20 the sheriff's report? 2.1 Α. Yes. And then the other item is just a -- an 22 Q. 23 initial notice letter from Cozen, who represented

24 Farmers at the time, about the first site

25 inspection. Correct?

Page 47 1 Α. Yes. And then going down to Photos and Videos, Q. 3 and it's listed Cause and Origin Investigation Pics. 4 Do you see that? 5 Α. Yes. Whose cause and origin investigation pics O. 7 are in your file? I would need to review the file to see. 8 Α. Do you know if you have cause and origin Ο. 10 investigation pics from more than one individual? Α. I believe so, yes. 11 When you say Cause and Origin 12 Q. 13 Investigation Pics, are those photographs -- they 14 all appear to be from the site, correct? 15 Α. Yes. 16 Ο. You do not have any photographs from the 17 lab inspection that was conducted in Salt Lake at 18 Palmer's lab, correct? 19 Α. Correct. 20 Q. Going to pages 2 and 3 of Exhibit 71, 21 there's some photographs here, correct? 22 Yes. Α. And one is -- there's at least a 23 Ο. 24 reference to Daren Slee scene photos. 25 Do you see that?

- 1 A. Yes.
- 2 Q. Are those -- so do you believe you have
- 3 Daren Slee's scene photos?
- 4 A. Yes, that's how it was represented to me.
- 5 Q. Did you get those directly from Mr. Slee
- 6 or were those routed to you through counsel?
- 7 A. Through counsel.
- 8 Q. And what is the -- what was the purpose
- 9 that you pulled out these four photos?
- 10 A. Just to have a visual reference of the
- 11 evidence as it was on-site.
- 12 Q. Is there any specific reason that you
- 13 chose these four?
- 14 A. Different -- just different perspectives.
- 15 So the first one is -- looks like it's as
- 16 found. The second one is as it's been extracted
- 17 from the house. The third one looks like just
- 18 another perspective of the same. The fourth one
- 19 is -- just shows that someone collected the
- 20 separated cells.
- 21 Q. So the two separated cells in the fourth
- 22 photograph, is it your understanding that those were
- 23 the two cells that were not embedded in the
- 24 hoverboard remains?
- 25 A. Yes.

Page 49 You have not reviewed any of the body 1 Q. 2 camera footage from this case, have you? I have not. 3 Α. Ο. Did you even know there was body camera 5 footage from immediate -- immediately after the 6 accident? MR. AYALA: Form. Α. I don't know. I didn't recall, unless it 9 was -- maybe it was mentioned in the sheriff report, 10 but... 11 BY MR. LAFLAMME: Regardless, you haven't reviewed any of 12 Q. 13 the body camera footage from the responding police 14 officers that responded the morning of the fire, 15 correct? 16 Α. Correct. 17 And you're not aware of any statements Ο. 18 that would have been made on that body camera 19 footage by any of the Wadsworth children, correct? 20 Α. Correct. And you're not aware of any of the 21 O. 22 statements that would have been made on that body 23 camera footage from Mr. Ryan Pasborg, correct?

Q. Do you know who Ryan Pasborg is?

Correct.

24

Α.

Page 50

1 A. I think he was the first one on scene, if

- 2 I remember correctly.
- 3 Q. He was the good samaritan that assisted
- 4 in getting the Wadsworth family out of the house.
- 5 You're not aware of any statements he
- 6 would have said on that body camera footage about
- 7 where he first saw fire, correct?
- 8 A. Correct.
- 9 Q. Do you know what UL codes are applicable
- 10 to the design and manufacture of this hoverboard?
- 11 A. I believe there's the UL -- I want to say
- 12 2722, if I remember the number correctly.
- 13 O. You were close. It's UL 2272.
- 14 A. 2272. Okay.
- 15 Q. Any other UL codes that you are aware of
- 16 that would apply to the design or manufacture of
- 17 this hoverboard?
- 18 A. I know there's another one that deals
- 19 with lithium-ion batteries. I don't recall the
- 20 number offhand.
- 21 O. Okay.
- 22 A. Yeah.
- Q. Do you know what the -- so you don't know
- 24 what the UL code is that applies to the specific
- 25 lithium-ion battery cells, correct?

Page 51 Correct. Not offhand. 1 Α. And in this case, it's your opinion that Q. 3 two of the -- two of the ten battery cells that were 4 in this battery pack experienced an internal short 5 circuit with thermal runaway. Correct? Α. Yes. And you've identified those in your Ο. 8 report as cells 4 and 10? 9 Α. Yes. 10 So you believe that it is a -- an issue Ο. 11 with the lithium-ion battery cells, for cell 4 and 12 10, that caused this fire? At least that's your 13 opinion in this case, correct? 14 Α. Yes. 15 Q. But you don't know what UL code applies 16 to these specific lithium-ion battery cells? I don't recall the number. 17 Α. 18 Do you know if the lithium-ion battery Ο. 19 cells in this hoverboard were UL listed? 20 Α. I did not check that, so I don't know. 21 (King Deposition Exhibit 72 marked.) 22 BY MR. LAFLAMME: We'll mark as Exhibit 72, this is a copy 23 Ο. 24 of a PowerPoint presentation that you went 25 through -- or at least put together, correct?

Page 52 1 Α. Yes. What is the purpose of the PowerPoint Q. 3 presentation? These were some notes for myself. Q. And is this a typical process that you do 6 during your investigations? 7 Α. Sometimes, yeah. Q. Have you done PowerPoint presentations in 9 other cases that you've worked on? 10 Α. Yes. Is the PowerPoint presentation put 11 Ο. 12 together before your report is put together? Α. 13 Yes. So going to the second page of 14 15 Exhibit 72, this shows a photograph of the outside 16 part of the Wadsworth residence, correct? 17 Α. Yes. And is it your understanding that the 18 Ο. 19 window that is more or less in the middle of that 20 photograph, that is the boys' bedroom window? 21 That is my understanding. Α. Meaning Gunner and Layne's bedroom 22 Q. 23 window? Α. Yes. 24 25 And here you indicate the father had a Q.

Page 53 1 plastic HAZMAT-type structure outside for smoking, 2 correct? A. Yes. Q. And you understand that that smoking shed 5 was just below the boys' window, correct? MR. AYALA: Form. Α. That's -- yes, that's my understanding. 8 BY MR. LAFLAMME: Q. And that's your understanding based on 10 your review and invest -- review of photographs and 11 investigation in this case? A. Yes, right. 12 Q. Do you know how big that smoking shed 13 14 was? 15 A. No, not specifically. 16 Q. Do you know what the smoking shed was 17 made out of? A. No, not -- not specifically as I sit 18 19 here. 20 Q. You then go on to state that the interior 21 origin is more likely, and then you list three 22 bullet points. Do you see that? A. Yes. 23 24 Q. You agree you're not making any origin 25 determinations in this case, correct?

Page 54 1 Α. Correct. One of the items that you list is: Fire Q. 3 damage to exterior wall studs is significantly less. Do you see that? 5 Α. Yes. Do you know if there was any difference O. 7 in the exterior wall stud construction compared to 8 the interior wall stud construction? 9 Not generally. Α. 10 Ο. You are aware that the exterior wall 11 construction had insulation in between the studs? Α. Yes. 12 13 Ο. Insulation can act -- can protect those 14 studs during a fire? 15 MR. AYALA: Form. 16 Α. It can. MR. LAFLAMME: I'm going to mark --17 what are we up to, 73? 18 19 (King Deposition Exhibit 73 marked.) 20 BY MR. LAFLAMME: Q. Show you what's been marked as 21 22 Exhibit 73. And just so I make sure I understand what 23 24 you are saying here with this statement, you are 25 stating that, on Exhibit 73, the studs on the

- 1 right-hand side of the photograph are not burned
- 2 completely through, correct?
- 3 A. Right. Compared to the interior --
- 4 further interior.
- 5 Q. And you can see that there was bat
- 6 insulation between those studs, correct?
- 7 MR. AYALA: Form.
- 8 A. Yes, I can see that.
- 9 BY MR. LAFLAMME:
- 10 Q. You agree that this photograph shows bat
- 11 insulation in between these studs?
- 12 A. Yes, it does.
- MR. AYALA: Form.
- 14 BY MR. LAFLAMME:
- 15 Q. And you agree that bat insulation can
- 16 protect areas of studs where it is installed, in a
- 17 fire, correct?
- MR. AYALA: Form.
- 19 A. It could protect -- yes, it could protect
- 20 whatever it's covering.
- 21 BY MR. LAFLAMME:
- 22 Q. So one reason in which we could see less
- 23 damage at the exterior wall study compared to the
- 24 interior wall studs is because there is bat
- 25 insulation on the exterior walls that are not

Page 56 1 present on the interior walls. Correct? MR. AYALA: Let me object to the 2 form. And are you opening the door to him 3 offering opinions as to origin and cause? MR. LAFLAMME: He's already said he's 5 not, but he has this in his PowerPoint. 6 7 MR. AYALA: Okay. But you're getting 8 a little bit beyond the PowerPoint, so if you wanted to --9 10 Object to the form. 11 BY MR. LAFLAMME: Go ahead. 12 Q. 13 Α. Can you repeat or can we have the 14 question repeated? 15 Q. Sure. So one of the reasons in which we could 16 17 see less damage at the exterior wall studs compared 18 to the interior wall studs is because there is bat 19 insulation in between the exterior wall studs, 20 correct? 21 MR. AYALA: Form. Yeah, I think that's a possibility. 22 Α. 23 BY MR. LAFLAMME: One of the other bullet points that you Ο. 25 have listed in your PowerPoint is the outside

Page 57 1 temperatures were around 10 degrees Fahrenheit at 2 4:00 a.m. and the window was likely closed. Do you see that? 3 Α. Yes. Q. You are aware that the window broke, the 6 boys' bedroom window broke in this fire, correct? Α. Yes. Q. And you are aware that the boys woke up 9 when that window broke, correct? 10 MR. AYALA: Form, and mischaracterizes testimony. 11 I don't know -- I guess I don't know 12 Α. 13 specifically when the boys woke up in the course of 14 this event. 15 BY MR. LAFLAMME: 16 Q. Okay. 17 Α. But... If a fire had started outside by this 18 Ο. 19 window, it could affect the window to the extent 20 that it could break it, correct? 21 MR. AYALA: Object to the form. 22 Α. Yes. 23 BY MR. LAFLAMME:

And if that window is broken, then an

25 outside fire would have a path into the boys'

Ο.

Page 58 1 bedroom, correct? 2 MR. AYALA: Form. It would, yes. Α. 4 BY MR. LAFLAMME: Q. And you understand that the boys' bed was 6 just on the other side of this bedroom window? Α. Yes, I believe so. Q. And you'd agree that a bed is a pretty 9 significant fuel load for a fire? 10 Α. Yes, it could be. So if a fire had started outside of this 11 Ο. 12 bedroom window and broken that window, it would then 13 have a significant fuel load in the form of the bed 14 on the other side of that window, correct? 15 MR. AYALA: Form. 16 Α. Yes. Hypothetically, yes. 17 BY MR. LAFLAMME: The third bullet point that you have is 18 Ο. 19 that the fire would have to rise along the outside 20 wall, enter the eaves and burn down with 21 preferential damage to the interior. 22 Do you see that? Α. 23 Yes. 24 Are you getting these statements from any O. 25 of the origin and cause investigators or are these

Page 59 1 three bullet points your own language? These are my own. Α. You did not do any fire spread analysis Ο. 4 in this case, correct? 5 Α. Correct. And you are not an expert on fire spread, Ο. 7 true? 8 Α. That's true. You're not an expert on fire modeling, Ο. 10 correct? 11 Α. Correct. And you did not do any fire modeling in 12 Q. 13 this case, correct? Correct. 14 Α. 15 Q. And you'd agree that another potential 16 path for this fire to spread to the interior of the 17 house would be through that bedroom window if that 18 window was broken? 19 MR. AYALA: Object to the form. 20 Α. If it was open and there was a fire 21 outside, it could spread in through an open window. 22 BY MR. LAFLAMME: And another way to open a window is 23 Q. 24 through breaking the window, correct?

25

Α.

Yes.

Page 60 1 MR. AYALA: Form. 2 BY MR. LAFLAMME: Q. If you could go to page 3 of this 4 PowerPoint. And this shows an individual holding a --6 it looks like a tape measure, on the left-hand side 7 across the studs between the boys' bedroom window 8 and the hallway, correct? 9 Α. Yes. And in the right-side photograph, there's 10 Ο. 11 a red circle added. Was that added by you? Yes. 12 Α. And I believe what you are trying to 13 Ο. 14 state is that -- or show with the red circle is that 15 that was the remnants of the hoverboard? 16 Α. Yes. 17 So looking at the left-side picture, do Ο. 18 you believe -- is it your position that that shows 19 the V pattern? 20 MR. AYALA: Form. 21 BY MR. LAFLAMME: Or do you not have an opinion as to 22 Q. 23 whether that's a V pattern or not?

In the context of the cause and origin

25 investigation, I don't have an opinion if that is a

Α.

- 1 V pattern.
- Q. So as far as looking at the left picture
- 3 on page 3, you do not have an opinion one way or the
- 4 other whether that fire pattern would qualify as a V
- 5 pattern, correct?
- 6 A. Not specifically.
- 7 Q. Well, specifically or not, you don't have
- 8 an opinion as to whether that fire pattern on the
- 9 wall studs between the hallway and the bedroom on
- 10 the left side photo is a V pattern, true?
- 11 A. True.
- MR. AYALA: Form.
- 13 A. It looks like a V, but if -- whether or
- 14 not that qualifies as a V pattern per the
- 15 investigative standards...
- 16 BY MR. LAFLAMME:
- 17 Q. What is the investigative standard that
- 18 defines what a V pattern is?
- 19 A. I don't know specifically. I assume
- 20 there's an NFPA standard to address that.
- 21 Q. Okay. But you don't know what that NFPA
- 22 standard is, correct?
- 23 A. Correct.
- Q. But looking at the photograph on the
- 25 right-hand side, you have the red circle where the

Page 62 1 hoverboard is. Do you see that? 2 Α. Yes. Ο. And you can see that the studs to the 5 left and right of that hoverboard are not fully 6 consumed. 7 Α. Yes. 8 Q. That's correct, right? 9 Α. Correct. 10 O. Meaning you can see the studs on both 11 sides of this hoverboard on the right side and the 12 left side, correct? Correct. And it looks like one is 13 Α. 14 missing where the hoverboard is. 15 Q. Okay. Are you aware of what an inverted 16 cone pattern is? 17 Α. No. You don't know what an inverted cone 18 Ο. 19 pattern is with respect to fire pattern analysis, 20 correct? 21 A. Correct. You do not see a V pattern coming off the 22 Q. 23 hoverboard on the right photo, correct? 24 MR. AYALA: Form. 25 A. Correct.

1 BY MR. LAFLAMME:

- Q. If you could go to page 4. And is this
- 3 just a summary of what was from the sheriff's
- 4 report?
- 5 A. Yes.
- 6 O. As to whether the statements in the
- 7 sheriff's report are accurate or not, are you taking
- 8 a position one way or the other in that regard?
- 9 A. I am assuming that they were accurate.
- 10 O. You weren't involved in the site
- 11 inspection at all, correct?
- 12 A. Correct.
- 13 Q. So any analysis of the site itself, you
- 14 are not able to state whether the sheriff's
- 15 department report is accurate or not, correct?
- 16 A. Not personally, no. Correct.
- 17 Q. If you could go to page 5. This lists
- 18 Fire Investigation Insurance Notes.
- 19 What does insurance notes mean?
- 20 A. I think that refers to my impression of
- 21 roughly where these notes came from was from an
- 22 insurance company or someone acting on behalf of an
- 23 insurance company.
- Q. Okay. Did you have notes in your file
- 25 from Farmers?

Page 64 Not -- I mean, I think Cristal is 1 Α. 2 associated with Farmers, and I have a note relating 3 to her. Ο. Is that a note that Cristal wrote? Α. I don't know who authored anything from 6 Farmers. How was it that you received the note Ο. 8 about Cristal not being able to rule out the -- a 9 fire from outside the bedroom window? 10 Α. That was part of the documentation 11 provided by counsel. If you could go to page 6. 12 Q. 13 And is this taken at your lab? 14 Α. Yes. 15 Q. So here we have, on the left-hand side, 16 the two loose cells, and then on the right-hand side 17 is the remnants of the hoverboard and the remainder 18 of the lithium-ion battery cells, correct? 19 Α. Yes. 20 Q. Purpose of putting these photographs in 21 just for general overview? 22 Yes. Α. Okay. Any other purpose? 23 Q. 24 Α. No. 25 Then going to page 7 of your PowerPoint, Q.

Page 65 1 here it shows the battery cell from an exemplar 2 Plasma unit, correct? Α. Yes. 3 Ο. And how is it that you obtained the 5 exemplar Plasma unit? Α. I purchased. 6 O. From where? Α. eBay. When did you purchase the exemplar Ο. 10 Plasma? 11 Α. Should be a few months ago. I don't 12 remember exactly. Had you purchased the exemplar Plasma 13 O. 14 before the lab inspection that we were at at your 15 place in February? Α. 16 No. Did you do anything to determine who the 17 Ο. 18 manufacturer was of the battery cell for the Plasma 19 unit? 20 Α. No. My understanding is JDDL is the name 21 of a manufacturer, but beyond that... Q. Do you know which manufacturer name that 22 23 is? 24 Α. No.

Have you seen any of the document

25

Q.

Page 66 1 productions that Jetson has made in this case? I don't believe so. You haven't seen any of the UL test 0. 4 reports or certification records in this case? 5 Α. I have not. O. We'll mark this as 74. 7 (King Deposition Exhibit 74 marked.) 8 BY MR. LAFLAMME: Handing you what's been marked as 10 Exhibit 74, which is a Bates document that starts 11 with JETSON 311. 12 Do you see that in the lower right-hand 13 corner? 14 Α. Yes. 15 Q. And you have not seen this before, 16 correct? Correct. 17 Α. If you go to the second page of this 18 0. 19 document, there's a description of this battery. 20 And you can see the model number is INR, all 21 capitalized, 18650P. 22 Do you see that? 23 Α. Yes. 24 Ο. And that's the same model number on this 25 battery cell, correct?

Page 67 1 Α. Yes. And then you can also see that it's Q. 3 9.0 -- I assume that's watt-hours? Is that --Α. Correct. 5 Q. Capital W, lowercase h. And that's also what is marked on this 7 battery cell, correct? Α. 8 Yes. So with respect to this battery cell, you 10 agree with me that the battery cell is the cell that 11 is covered in this UL report? 12 MR. AYALA: Form. Yes, it looks like the exemplar matches 13 Α. 14 the UL report. 15 BY MR. LAFLAMME: And on the first page of Exhibit 74, it 0. 17 lists the manufacturer. And I'm not going to try to say it, 18 19 but... 20 Α. I see it. Okay. Did you do -- you haven't done 21 Ο. 22 anything to verify whether this battery cell that 23 was used in the Plasma was UL certified, correct? 24 Α. Correct. 25 In looking at the document before you, Q.

- 1 Exhibit 74, you agree with me that this is a UL
- 2 certification report for this model battery cell?
- 3 A. Yes.
- 4 Q. So with respect to the battery cell that
- 5 was utilized in the Plasma model hoverboards, you
- 6 agree that they were UL-certified battery cells,
- 7 correct?
- 8 MR. AYALA: Form.
- 9 A. It certainly appears they were, based on
- 10 this report.
- 11 BY MR. LAFLAMME:
- 12 Q. Did you ever ask to see Jetson's document
- 13 production in this case?
- 14 A. I don't recall if I did or didn't.
- 15 Normally I would, yeah.
- 16 O. The UL test records and certifications is
- 17 something that would directly relate to your
- 18 analysis in this case, correct?
- 19 A. Somewhat. They could help if we wanted
- 20 to dig into why these specific cells might have an
- 21 internal short.
- 22 Q. Do you have an understanding as to what
- 23 testing was required of these cells in order to
- 24 obtain the UL certification?
- 25 A. Not in -- not really, as I sit here.

Page 69 Do you know if a short-circuit test was Q. 2 done as part of the UL certification and test 3 process? Α. I believe so, yes. And now in looking at this document, you Q. 6 are aware that UL 2580 is the standard that applies 7 to battery cells, lithium-ion battery cells, 8 correct? Α. Yes. You did not know that prior to looking at 10 Ο. 11 this document, correct? I did not recall the document number, the 12 Α. 13 UL number. Q. Did you consult with UL 2580 at all in 15 your analysis in this case? Α. 16 No. 17 O. And you don't reference UL 2580 at all in 18 your report, correct? 19 Α. Correct. 20 Are you aware of a recall that Jetson had 21 on a different hoverboard model? 22 Yes. Α. What is your awareness of that? 23 Q. 24 I believe it was the Roque model, model Α. 25 name. I -- if I recall correctly, it was related to

Page 70 1 possible -- a possible fire hazard. 2 Q. Okay. But that's the extent of my recollection. Α. Ο. So it sounds like your knowledge of the 5 recall on the Rogue model is more general as opposed 6 to any in-depth analysis that you've done on that 7 issue. Α. Correct. Do you even know what type of battery 10 cells the Rogue model had compared to the Plasma? 11 Α. No. You are aware from reviewing Mr. Husain's 12 Q. 13 deposition testimony from Jetson that the battery 14 cells were from a different manufacturer? 15 Α. That sounds familiar, him saying so. So the battery manufacturer that we have 16 Ο. 17 for the Plasma model is --MR. LAFLAMME: I'm just going to let 18 19 you type that. 20 BY MR. LAFLAMME: 21 Q. -- Jiangxi Jiuding Power. MR. LAFLAMME: And that's probably 22 good enough. 23 24 BY MR. LAFLAMME: 25 I'm going to try to say this Q.

```
Page 71
 1 phonetically. Is -- actually, I'm not even going to
 2 try to say it.
              The battery manufacturer is listed on the
 3
 4 first page of Exhibit 74, correct?
 5
        Α.
              Yes.
              And you don't know whether that's the
        Ο.
 7 same battery manufacturer for the lithium-ion
 8 battery cell that was involved in the Rogue model,
 9 correct?
10
        Α.
              Correct.
             And you did not do anything to assess
11
        Ο.
12 that issue?
13
       Α.
            Correct.
14
             All right. Going to page 8.
        Ο.
15
        Α.
           Of which?
           Oh, I'm sorry. Of your PowerPoint, which
16
        Q.
17 is Exhibit 72. All right.
              Looking at page 8 of Exhibit 72, this is
18
19 what appears to be just a comparison from the
20 exemplar compared to the subject unit, correct?
21
        Α.
              Yes.
             And then if we go to page 9 of your
22
        Q.
23 PowerPoint, this is when you remove the exemplar
24 battery pack, correct?
25
        Α.
              Yes.
```

```
Page 72
              And when all the cells are put together,
 1
        Q.
 2 that's generally referred to as a battery pack,
 3 correct?
        Α.
              Yes.
              And this battery pack has ten cells?
 5
        Q.
        Α.
              Yes.
              On the bottom-left photographs on page 9,
        Ο.
 8 it looks like there's little Post-Its there.
                                                   Is
 9 that just marking the positive and negative sides of
10 the battery?
        Α.
11
              Yes.
12
        Q.
              So I was able to make out that the orange
13 ones are P, for positive, correct?
14
        Α.
              Yes.
15
        Q.
              Are the yellow ones, is that an N?
16
        Α.
              Yes.
17
              Okay. I wasn't able to tell what that
        Q.
18 letter was.
19
              And if we look at page 10 of the
20 PowerPoint, this is a CT scan of the battery pack
21 side of the hoverboard, and you can see that there
22 is eight of the ten cells that are shown in there,
23 correct?
24
        Α.
              Yes.
25
              You call it a vertical connection between
        Q.
```

Page 73 1 3 and 8 -- or cells number 3 and 8. Α. Yes. What's the purpose of calling out the Ο. 4 vertical connection? It's one of the similar features that can Α. 6 be seen in the exemplar battery pack. 7 So if you look in the bottom left, there 8 are what I call vertical connections, and there's 9 diagonal connections, and a horizontal connection on 10 the other side. So it's just a feature. And these connections are what put these 0. 12 batteries into parallel and series, correct? I believe it's all series, but yes. 13 Α. So for the Plasma battery pack, you 14 Ο. 15 believe that battery pack is put together all in 16 series? 17 Α. Yes. And nothing in parallel? 18 O. 19 That's my recollection, yes. Α. 20 Q. And back to page 10 of the PowerPoint. 21 You have an arrow, kind of by the right side of cell 22 number 10 that says PCB underside?

So that's the primary circuit board?

Yes. Yeah, printed circuit board.

23

24

25

Α.

O.

Α.

Yes.

Q. Oh, sorry, printed circuit board.

2 A. Yeah.

1

- 3 Q. So the printed circuit board for the
- 4 hoverboard, if we're looking at the hoverboard's
- 5 construction, would have been just beneath the
- 6 battery pack?
- 7 A. Yes.
- 8 Q. And if we go to page 11 of your
- 9 PowerPoint, and here you have just a top-down
- 10 photograph, but you do mark some of the batteries
- 11 that are visible at that location and compared to
- 12 how you numbered them.
- 13 A. Yes.
- 14 Q. And on page 12, which is the last page of
- 15 your PowerPoint, Exhibit 72, this is somewhat of a
- 16 recap of what your expert report says, correct?
- 17 A. Yes.
- 18 Q. So here, 10 cells total, all cells
- 19 accounted for, and then you, at the third primary
- 20 bullet point, you reference the most extensive
- 21 damage is to cells 4 and 10, which have blown out.
- 22 Do you see that?
- 23 A. Yes.
- Q. And cells 4 and 10 would have blown out,
- 25 to use your term, on the positive cap side?

Page 75 1 Α. Yes. Q. The negative side does not have a cap, 3 correct? Α. Correct. And then you have: Internal materials Q. 6 are mostly ejected, meaning they would have left the 7 cell itself, correct? 8 Α. Yes. And they would have left the cell through Ο. 10 the end cap? Α. Yes. Or along with the end cap. 11 And then you have that that is consistent 12 Q. 13 with an internal short, correct? 14 Α. Yes. 15 Q. And when you say internal short, you mean 16 a short circuit? 17 Α. Yes. And in order to get a short circuit, you 18 Ο. 19 have to have -- does that require communication with 20 the positive and negative side, meaning the anode 21 and cathode?

- 22 A. Yes. Yep.
- Q. And then, so it's your opinion that
- 24 cells 4 and 10, they both had an internal short
- 25 circuit, correct?

- 1 A. Yes.
- 2 Q. And so ultimately, you attribute the
- 3 cause of this fire to the internal short circuit
- 4 with both cells 4 and 10?
- 5 A. I think that it's more likely.
- 6 Q. So you think it's more likely than not
- 7 that the internal short circuit that you have
- 8 identified in cells 4 and 10, that both of those
- 9 cells were the cause of the fire?
- 10 A. Yes.
- 11 Q. What temperature does a lithium-ion
- 12 battery cell in 18650 reach when it fails through
- 13 its end cap?
- 14 A. It can reach hundreds of degrees
- 15 centigrade, or Celsius.
- 16 O. What is that in Fahrenheit?
- 17 A. More hundreds.
- 18 Q. All right. Now I'm going to have to get
- 19 a calculator because I speak in Fahrenheit language.
- When you say hundreds of degrees of
- 21 Celsius, what are you talking about?
- 22 A. Well, when the cell is experiencing a
- 23 thermal runaway, and it's to the degree that it's
- 24 going -- or does explode, typically that's -- that's
- 25 when it's at its highest temperature.

- 1 Q. Okay. And what is its highest
- 2 temperature?
- 3 A. That's in hundreds of degrees. I don't
- 4 have a specific --
- 5 Q. Eight hundreds of Celsius?
- 6 MR. AYALA: Form.
- 7 A. It could be. Sounds possible. Maybe
- 8 600.
- 9 BY MR. LAFLAMME:
- 10 Q. Do you have any information as to what
- 11 temperature a lithium-ion battery cell, what the
- 12 range is within the internal portion of the cell
- 13 when it fails through its end cap?
- 14 A. For the internal components, I believe
- 15 they need to exceed 170 Celsius to get into that
- 16 last stage of the thermal runaway. But once that
- 17 combustion begins, I don't know what the -- what
- 18 temperature that might continue to reach.
- 19 Q. Have you done any research to determine
- 20 what the internal temperature of a lithium-ion
- 21 battery cell would reach in order to fail through
- 22 the end cap?
- 23 A. I have previously read some studies on
- 24 that.
- 25 Q. You --

- 1 A. But the -- but specifically measuring the
- 2 internal temperature when it blows off the end cap,
- 3 I'm not aware.
- 4 O. You're not aware that 1900 degrees
- 5 Fahrenheit is about when the -- where the internal
- 6 temperatures of a lithium-ion battery cell will
- 7 reach when it fails through its end cap?
- 8 MR. AYALA: Form.
- 9 A. I wasn't aware of that specific
- 10 temperature, no.
- 11 BY MR. LAFLAMME:
- 12 Q. Does that temperature sound incorrect to
- 13 you?
- MR. AYALA: Form.
- 15 A. It sounds plausible.
- 16 BY MR. LAFLAMME:
- 17 Q. So you agree, based on your experience
- 18 and knowledge and expertise that you are being
- 19 presented for, that 1900 degrees Fahrenheit is a
- 20 plausible temperature in which the lithium-ion
- 21 battery cells would reach when they fail through
- 22 their end cap, correct?
- 23 A. Yes.
- Q. And when they fail through the end cap,
- 25 the contents of the cell is then pushed out of the

```
Page 79
 1 top, or rather it pushes the end cap off and then it
 2 spills out the top, correct?
 3
        Α.
              Yes.
              When the short circuit first occurs in
        Ο.
 5 cells 4 and 10, the hoverboard would still be
 6 intact, correct?
        Α.
              Yes.
        Q.
              Meaning they're still within the plastic
 9 casing of the hoverboard itself, correct?
10
        Α.
              Yes.
              So when they first spill their contents,
11
        O.
12 they would be spilling their contents within the
13 confined space of the hoverboard shell, correct?
14
        Α.
              Yes.
15
        Q.
              So with respect to your believed mode of
16 failure, you have cells 4 and 10 with a short
17 circuit. They both -- both of their end caps fail
18 and then their contents expel, correct?
19
        Α.
              Yes.
20
                  MR. AYALA:
                              Eugene, whenever you find
         the time, we've been going two hours now.
21
         don't want to break up if you're in a mode, so
22
         just --
23
24
                  MR. LAFLAMME: Once I get off this
25
         topic, I'll --
```

Page 80 1 Thanks. 2 BY MR. LAFLAMME: With respect to your failure mode, you 0. 4 have the battery pack that is located within the 5 plastic shell, correct? Α. Yes. And then you have cells 4 and 10, which O. 8 are the two that you believe short-circuited and 9 failed. Correct? 10 Α. Yes. So they both spilled their contents 11 0. 12 within the confines of the hoverboard shell, 13 correct? 14 Α. Yes. 15 Q. And then you believe that that is, then, 16 what started the fire? 17 Yes, I think that's likely. Α. So you believe that the spilled contents 18 Ο. 19 of cells 4 and 10 would have then ignited other 20 stuff within the hoverboard shell? Am I following 21 correct? Yes. And with the end cap explosion, it 22 Α. 23 typically -- there's typically flame associated with 24 the cell itself. 25 So when you have the -- when you have the Q.

- 1 short circuit at cells 4 and 10, so then you
- 2 ultimately get to the point where there's the
- 3 failure that the cap comes off with the contents of
- 4 the cell, and at the same time, there's flame.
- 5 A. Yes.
- 6 Q. Okay. And so that is -- that's all
- 7 affecting the internal portions of the hoverboard,
- 8 which then you believe would be the next item to
- 9 catch on fire?
- 10 A. That would be the next -- yeah, just in
- 11 space, that's the next item is the hoverboard.
- 12 Q. Okay. So basically, whatever
- 13 combustibles within the hoverboard would be adjacent
- 14 to where the end caps failed for 4 and 10, would in
- 15 essence be the next items ignited?
- 16 A. Yes.
- 17 Q. Did cells 4 and 10 -- were they oriented
- 18 so that their positive side was in the same
- 19 direction or in different directions?
- 20 A. I don't recall.
- 21 Q. Would looking at -- you have a CT on
- 22 page 10 of your PowerPoint.
- I don't know if that tells you, because
- 24 the end of 4 is a little hidden.
- 25 A. So it looks like they would be oriented

Page 82 1 opposite. Okay. So 10 -- 10 is, at least on Q. 3 page 10 of your PowerPoint exhibit, is oriented so 4 that the end cap is towards the wheel, correct? 5 Α. Yes. And then 4 would be oriented so that that Ο. 7 end cap is towards the middle of the hoverboard? 8 Α. Yes. 9 Ο. Okay. 10 Α. And in this case, 4 looks like it's been 11 folded out of the cells. Okay. 12 Q. Of the pack. 13 Α. 14 So, you know, as it is, the positive is 15 facing the wheel also, but if it were folded back 16 into its original position, it would be towards the 17 middle. 18 Q. Gotcha. Okay. 19 Α. Okay. 20 Q. So within the battery pack, when they 21 failed, they would have been facing opposite sides 22 for the end cap, correct? 23 Α. Yes. 24 MR. LAFLAMME: We can take a break

25

now.

```
Page 83
                  (Recess taken, 11:31 a.m. to
 1
                  11:38 a.m. PDT)
 3 BY MR. LAFLAMME:
             Mr. King, we were talking about -- or
 5 have gone through Exhibit 72 a bit, which is in
 6 front of you.
              On the first page is -- there's just a
8 designation of 23-6098. I assume that's your
 9 internal file number?
10
        Α.
              Yes.
       Ο.
             2023 --
11
           Yes.
12
       Α.
           -- would indicate the year in which you
13
        Ο.
14 were hired?
15
        Α.
              Yes.
              And then obviously the file number is
16
        Q.
17 however you designate the file number, the 6098?
18
        Α.
              Yes.
19
                  (King Deposition Exhibit 75 marked.)
20 BY MR. LAFLAMME:
        Q. Sir, Exhibit 75 was another part of your
21
22 expert file. And this just appears to be a
23 highlighted version of the Sweetwater County
24 Sheriff's Department where you, it looks like, just
25 highlighted or circled each time one of the names
```

- 1 was mentioned.
- 2 Is that what you did here?
- A. No. This was highlighted and annotated
- 4 as I received it.
- 5 Q. So the highlightings and circles of the
- 6 individuals throughout this report, that was how you
- 7 received it from counsel?
- 8 A. Yes.
- 9 Q. And this wasn't received directly from
- 10 the sheriff's department, right? It was through
- 11 counsel?
- 12 A. Yes.
- 13 Q. So as far as the specific reasons or
- 14 importance of the various names that are highlighted
- 15 or circled, you don't know?
- 16 A. Correct.
- 17 O. Did you do any highlighting or circling
- 18 or notes independent of what we see here on the
- 19 Sweetwater County Sheriff's report related to this
- 20 report?
- 21 A. No, not other than what was in the
- 22 summary document we already looked at.
- 23 Q. That makes that one easy.
- 24 Before the break we were talking about
- 25 how you believe cells 4 and 10 both had this short

- 1 circuit, and their end caps would have came off
- 2 within the hoverboard, which then ignited other
- 3 combustibles within the hoverboard. Correct?
- 4 A. Yes.
- 5 Q. And when there's a short circuit within a
- 6 battery cell, you would expect the tab within the
- 7 cell to have some damage to it, correct?
- 8 MR. AYALA: Form.
- 9 A. Yes.
- 10 BY MR. LAFLAMME:
- 11 Q. And what is the -- do you know what the
- 12 tab is within an 18650 lithium-ion battery cell?
- 13 A. Well, there's a positive and a negative
- 14 tab that connects the anode catheter to the exterior
- 15 of the cell.
- 16 Q. Let me see if I can find a picture of
- 17 those.
- 18 (King Deposition Exhibit 76 marked.)
- 19 BY MR. LAFLAMME:
- 20 Q. Sir, I have handed you what's been marked
- 21 as Exhibit 76, which is from the CT scans that were
- 22 done on this hoverboard. And this is from -- this
- 23 is side B of cell 10.
- And inside you can see the tab, correct?
- 25 A. Yes.

```
Page 86
              And do you know what -- just so we're --
 1
        Q.
 2 make sure we're communicating on the record, the tab
 3 is what we see moving from the bottom, the negative
 4 side, up to the -- toward the positive side,
 5 correct?
        Α.
              Yes.
              And that is inside the cell?
        O.
 8
        Α.
             That's right.
              What is the tab made of?
 9
        Ο.
              I mean, typically -- let's see. They're
10
        Α.
11 made of a nickel alloy, but I did not specifically
12 check this tab.
13
        Ο.
              Do you know what the melting temperature
14 is generally of the metal that is used for a tab
15 internal to a lithium-ion battery cell?
16
        Α.
              No, not offhand.
17
              And looking at the tab in Exhibit 76,
        Ο.
18 this tab is still intact, correct?
19
              Yes, it appears to be.
        Α.
20
        Q.
              And had there been a short circuit in
21 this cell, you'd expect to see more damage to this
22 tab, wouldn't you?
23
                  MR. AYALA:
                              Form.
24
        Α.
              Possibly.
25
```

Page 87 1 BY MR. LAFLAMME: And with respect to Exhibit 76, that Q. 3 doesn't show really any damage to this tab, correct? MR. AYALA: Form. Α. That's correct. Just a little 6 deformation. 7 (King Deposition Exhibit 77 marked.) 8 BY MR. LAFLAMME: In looking at Exhibit 77, which is from 0. 10 the CT scan in a cross section of cell 4, here we 11 still see the tab intact, correct? 12 Α. Yes. And there's no melting on this tab? 13 Q. Not that's apparent. 14 Α. 15 Q. And there was no melting on the tab in 16 Exhibit 76 either, correct? 17 Α. That's correct. Q. And as with cell 10 in Exhibit 76, you 18 19 would expect to see some damage or melting to this 20 tab had there been an internal short circuit, 21 correct? 22 A. Possibly. 23 MR. AYALA: Form. 24 BY MR. LAFLAMME: Q. And in order to get an internal short 25

Page 88 1 circuit, we talked about how the anode and cathode 2 need to communicate, correct? Α. 3 Yes. Ο. And the -- in between the anode and 5 cathode within an 18650 cell is a separator, 6 correct? Α. Yes. Q. And what is the separator made out of? Α. It's typically a polymer, a porous 10 polymer. 11 So in order for the short circuit to 0. 12 occur in cells 4 and 10, you need to have a failure 13 of the separator, correct? 14 Α. Yes. 15 Q. If the separator doesn't fail, then there 16 is no way for a short circuit to occur, correct? 17 Α. That's right. 18 And the separator is -- it's independent Ο. 19 to each cell, correct? 20 Α. Each cell has its own separator. Right. So -- I guess what I'm getting at 21 Q. 22 is, so each of the ten cells has its own separator

- 24 A. Yes.
- Q. So in order to get a short at cells 4 and

23 between the anode and cathode, correct?

- 1 10, both of those separators, so the separator in
- 2 cell 4 and the separator in cell 10 would need to
- 3 fail in order to get the communication from the
- 4 anode and cathode.
- 5 A. Yes.
- 6 Q. And both of those separators would have
- 7 to fail at the same time in order to get a short in
- 8 cells 4 and 10, correct?
- 9 A. I don't see a timing requirement for
- 10 those to be synchronized.
- 11 Q. Well, in order to get -- because we just
- 12 talked about how you have cells 4 and 10, those are
- 13 the two cells that had a short circuit, correct?
- 14 A. Yes.
- 15 Q. And both of those cells, when they had
- 16 their short circuit, you talked about how your --
- 17 the progression of the failure was that the end caps
- 18 would have come off on cells 4 and 10, then you'd
- 19 get the internal contents and some flame on the
- 20 internal portions of the hoverboard, which would
- 21 then ignite combustibles by cells 4 and 10, correct?
- 22 A. Yes.
- 23 Q. And cells 4 and 10 would have failed at
- 24 the same time, correct?
- MR. AYALA: Form.

- 1 A. Approximately, yeah.
- 2 BY MR. LAFLAMME:
- 3 Q. So in order to get the cells 4 and 10 to
- 4 short circuit, both of their separators would have
- 5 had to fail at approximately the same time, correct?
- 6 A. Yes.
- 7 Q. Have you ever had any other hoverboard
- 8 cases where you believe there was a short circuit in
- 9 two different cells at approximately the same time?
- 10 A. I have not personally had any other
- 11 hoverboard cases.
- 12 Q. Okay. How about any other lithium-ion
- 13 battery cases, any others that you can identify
- 14 where you believe the -- two of -- at least two of
- 15 the battery cells within the battery pack failed at
- 16 approximately the same time due to a short circuit?
- 17 A. Not -- nothing comes to mind.
- 18 Q. Okay. If you could pull out your
- 19 PowerPoint again, and go to the page of the CT scan.
- 20 Were you able to -- was there any arcing
- 21 that was found on any wires within the hoverboard?
- 22 A. Not that I observed.
- 23 Q. Was there any arcing -- or are you aware
- 24 of any arcing that was found on any wires related to
- 25 the Wadsworth house at the site?

Page 91 A. I thought someone mentioned a possible 2 arc outside. I'm not certain that --Q. So you are aware that there has at least 4 been some discussions about some arcing that may 5 have been found on some wires outside of the 6 residence? A. Yes, at least some discussion of that 8 possibility. Q. Do you know where that arcing was 10 located? A. Somewhere related to the shed, the 11 12 smoking shed. O. So you are aware at least of at least 13 14 some discussion about some arcing that was 15 identified at the smoking shed outside of the 16 residence, correct? 17 Α. Yes. Q. Are you aware of any arcing that was 18 19 identified inside the residence, the internal house 20 wiring? A. No, I'm not. 21 And this hoverboard was located just in 22 Q.

- 23 front of an electrical outlet, correct?
- A. I believe so, yes.
- Q. And you're not aware of any arcing that

- 1 was located on that electrical outlet or the
- 2 associated wires, correct?
- 3 A. I'm not aware of any.
- 4 O. And arcing within a fire occurs when an
- 5 electrical line is hit by flames or high heat and it
- 6 is energized, correct?
- 7 A. Yeah. If the insulation between the
- 8 electrified lines goes away and they contact each
- 9 other, then you can get an arc.
- 10 Q. And one of the tenets -- or one of the
- 11 necessities in order to have an arc to occur on an
- 12 electrical wire is that it needs to be energized,
- 13 correct?
- 14 A. Yes.
- 15 Q. Do you know where the electrical service
- 16 came into the house at the Wadsworth residence?
- 17 A. No.
- 18 O. And do you know where the electrical
- 19 service came into the house in relation to where the
- 20 smoking shed was located?
- 21 A. No.
- 22 Q. Have you seen any photographs of the
- 23 arcing that was identified at the smoking shed?
- 24 A. No.
- Q. Looking at the CT scan that you have in

```
Page 93
 1 your PowerPoint which has been marked as Exhibit 72,
 2 so if we look at cell 10, and we can see that that
 3 end cap is missing, correct?
        Α.
              Yes.
        Q.
              And then there's some wiring that is
 6 coming off of the tire that passes through that
 7 area.
 8
              Do you see that?
 9
        Α.
              I do. It's this, yeah?
10
        Ο.
              Correct.
              It's going to be tough to describe, but
11
12 there's some wiring that comes off a barrel, so to
13 speak, that is next to the battery pack, correct?
14
        Α.
              Yeah. It's -- and this is a 2D
15 rendering, but in the image, yes.
16
        Q.
              Okay.
17
              All right. And then could you go to
18 page 8 of your PowerPoint, which is the comparison
19 between the exemplar and the subject hoverboard.
20
        Α.
              Yes.
              Actually, what may be -- why don't we go
21
        Ο.
22 off the record quickly.
23
                  (Discussion off the record.)
24 BY MR. LAFLAMME:
25
              Mr. King, we went off the record quickly
        Q.
```

Page 94 1 just because the Exhibit 72 that you had did not 2 have page numbers on it, so we added page numbers to 3 it. And it is starting on page 1 with the cover 4 sheet, and the last page should be page 12. Yes. 5 Α. Q. Accurate? Α. Accurate. Q. Okay. If you could go to page 8 of 9 Exhibit 72. 10 Α. Okay. And this is what shows the comparison of 11 Ο. 12 the exemplar compared to the subject hoverboard. 13 Correct? 14 Α. Yes. 15 Q. So if we are looking at -- sorry if 16 I'm --17 Α. That's all right. -- at which cell is cell 10, is that the 18 O. 19 top one that is closest to us or do you have them 20 actually labelled there? Α. They are labeled. So it's going to be 21 22 the bottom of the closest. Okay. So cell 10 would be directly 23 Q. 24 beneath cell 1.

25

Α.

Yes.

Page 95 And then cell 4, we can see where that is 1 Q. 2 located, correct? Α. 3 Yes. And if you look at the exemplar, you can 5 see the wires that are colored that we were seeing 6 in the CT scan, correct? Α. Yes. Q. All right. And there was no arcing on 9 any of these wires, correct? Correct. 10 Α. And the wires still had their insulation 11 Ο. 12 on them with their -- still had their colored 13 insulation on them, didn't they? 14 In at least some section, yes. Α. 15 Q. And do you know what temperature it takes 16 to melt the plastic insulation off of wiring? 17 Α. Approximately 90C. Depends on the 18 insulation. Ο. It's certainly less than the temperature 20 that the internal cell contents would come out at or 21 the fire that would result from the end cap failure, 22 correct? It's less than fire temperatures, yes. 23 Α.

Okay. And here, with this fire, we have

25 still the colored insulation on some of the

24

O.

Page 96 1 electrical wires that are directly next to where you 2 believe cell 10 failed through its end cap, correct? So when I look at this -- so on -- it Α. 4 looks like on the same page of this subject you can 5 just see a small section of colored wires in the 6 subject. To me, that looks like that section would 7 be closer to cells 8 -- closer to cell 8, especially 8 when it's in its -- in the assembled condition. As far as the wiring next to cell 10, 10 it's not clear to me that -- I mean, we couldn't 11 visually see that area, at least I don't recall 12 being able to see that section of wiring. 13 Ο. But you agree that there was no arcing in 14 that location, correct? 15 Α. Yes. 16 Yeah. And then, those wires, I -- I 17 wouldn't -- I wouldn't expect those to be energized, 18 because those -- it looks like those are going 19 through the axle -- it's like a hollow axle conduit 20 going to the motor. So I wouldn't expect those to 21 be energized unless the motor was running. 22 Q. But there was no arcing anywhere within 23 this hoverboard, correct, on any of the wires? 24 I believe that's correct, yeah. Α. 25 How far away would cell -- is cell 8 from

Q.

Page 97 1 cell 10, distance-wise? It's -- well, it's one cell in between, Α. 3 so approximately 20 millimeters. Ο. Okay. And in 18 -- you would agree, 5 these are 18650 lithium-ion battery cells, right? Α. Yes. And the 18 is the designation for the Ο. 8 diameter? 9 Α. Right. 10 Ο. So an 18650 cell is 18 millimeters wide. Α. 11 Yes. So cell 10's end cap would have failed, 12 Q. 13 under your theory, about 20 millimeters away from 14 where we still have colored insulation on wiring, 15 correct? 16 Α. Yes. How far is 20-milliliter --17 Ο. 18 20 millimeters in inches? 19 Α. It's almost an inch. 20 Q. Would .78 inches sound accurate? 21 Α. That sounds right. So less than an inch away from where you 22 Q. 23 believe one of the end caps failed within the 24 internal portions of the hoverboard, you still have 25 colored wired insulation present, correct?

Page 98 1 Α. Yes. And the circuit board was -- is directly Q. 3 beneath the battery pack, correct? Α. Yes. Q. And what is the -- what's a circuit board 6 constructed of? It's a mix of polymer and metal. Metal Α. 8 traces, you know, the components that get soldered 9 on. 10 Q. So the components could be capacitors, 11 MOSFETS, things of that nature? 12 Α. Yes. And the components are connected to the 13 Ο. 14 circuit board with solder, correct? 15 Α. Yes. 16 Q. Do you know what temperature solder melts 17 at? Not offhand. 18 Α. 19 Ο. It's a pretty low temperature, correct? 20 Α. Yes, it is. Does about 300 degrees sound familiar for 21 Q. 22 what solder would melt at? 23 MR. AYALA: Form. 24 That's -- that sounds plausible. Α. 25 Reasonable.

Page 99 Okay. Did any of the solder melt off of 3 the circuit board in this case? I would need to look at that again. When determining whether the fire 7 originated as a result of a short circuit at cells 4 8 and 10, wouldn't it be important to assess the 9 condition of the circuit board that's immediately 10 beneath the battery pack?

- 11 MR. AYATA: Form.
- It's possible. It would be an 12 Α.
- 13 interesting data point.
- 14 BY MR. LAFLAMME:

1 BY MR. LAFLAMME:

Q.

5 can't tell you.

Ο.

- 15 Q. Meaning because if you had 18650 cell
- 16 contents spilling out directly above the circuit
- 17 board along with flame above the circuit board, you
- 18 would expect the circuit board to be impacted by
- 19 that, correct?
- 20 MR. AYALA: Form.
- To some degree. You know, the direction 2.1 Α.
- 22 where these contents and the flame from the cell
- 23 specifically go, that would -- that would vary what
- 24 the damage is on the circuit board.
- 25

Page 100 1 BY MR. LAFLAMME: It sounds like you did not do an analysis Q. 3 of the circuit board for your opinion in this case, 4 correct? Α. Correct. (King Deposition Exhibit 78 marked.) 7 BY MR. LAFLAMME: 8 Q. I'll hand you what's been marked as 9 Exhibit 78, which is from the CT scan. 10 And this shows the PCB, correct? 11 Α. Yes. And on the PCB, you can still see that 12 Q. 13 all of the electrical components are intact on the 14 PCB, correct? 15 Α. Yes. And the -- in order for the electrical 16 0. 17 components to still be present, they would -- the 18 solder would need to stay in place, correct? 19 Α. Yes. 20 Q. So you agree that there is not any damage 21 to the PCB that impacted the presence of soldering 22 on it, correct? 23 MR. AYALA: Form. 24 That's -- that appears to be true. Α. 25

Page 101 1 BY MR. LAFLAMME: Q. Okay. That's what the CT scan shows, 3 correct? Α. Yes. So the CT scan shows that the solder on 0. 6 the PCB, along with the electrical components --7 Well, let me take a step back. So the CT scan shows that the solder on 9 the PCB is still in place, correct? 10 Α. Yes, at least for what's in this image. And the electrical components, 11 Ο. 12 capacitors, MOSFETS, those are still in place on the 13 PCB as well. They look like they're still where Α. 15 they're supposed to be. And you did not find any loose 16 Ο. 17 capacitors, MOSFETS, or other types of electrical 18 components from the PCB within the evidence that you 19 looked at for the hoverboard, correct? 20 Α. Correct. Meaning there wasn't anything loose from 21 Ο. 22 the PCB that was collected within the hoverboard 23 evidence, correct? 24 MR. AYALA: Object to form. 25 Α. Not that I found.

Page 102 1 BY MR. LAFLAMME: O. And MOSFETS are M-O-S-F-E-T-S. Is that 3 right, Mr. King? Is it F-E-T-S? Α. Yes. And I think it's all capitalized too. Q. 6 It's an acronym for something. 7 Α. Mm-hmm. Q. And the underside of this hoverboard was 9 still mostly intact, correct? 10 Α. Yes. And the carpeting beneath the hoverboard 11 Ο. 12 was still intact? 13 Α. Yes. And you could still see the color, the 14 Ο. 15 iridescent color of the hoverboard on the underside 16 it of, correct? 17 Α. Yes. And you could see the iridescent color on 18 Q. 19 the underside of both sides of the hoverboard, 20 correct? 21 Α. Yes. Meaning the side also directly beneath 22 Q. 23 the battery pack that you believe had a failure in 24 it? 25 Α. Yes.

Page 103 And the wheels on the underside still had 1 Q. 2 their treads, correct? I don't recall specifically. 3 Α. Ο. Okay. Just a second here. I'm going to have to do this one 6 electronically, and then I think what we can do is I 7 can send it to you and we can mark it, and I'll flip 8 this around for you so you can see it. 9 (King Deposition Exhibit 79 marked.) 10 BY MR. LAFLAMME: 11 Ο. I think we have it so you and I are 12 looking at the same thing now. 13 Do you see my cursor moving? 14 Α. Yes. 15 Q. So we are -- there are three photographs 16 here in this Word document, two on the first page, 17 one on the second page, which we will mark as 18 Exhibit 79. 19 And here you can see the underside of the 20 hoverboard, correct? 2.1 Α. Yes. And as we discussed, it still has the 22 Q. 23 iridescent coloring to it, correct? 24 Α. Yes. 25 What side of the hoverboard is the Q.

- 1 battery side?
- 2 A. I don't recall from this orientation.
- 3 Q. Does me going down to any of the other
- 4 photos help, or no?
- 5 A. It does not help my recollection.
- 6 Q. Okay. All right. So at least on both
- 7 sides, both the battery side and the nonbattery
- 8 side, we still have some iridescent coloring, and
- 9 the bottom is pretty well intact. True?
- 10 A. Yeah.
- MR. AYALA: Form.
- 12 A. From -- I mean, the ends. The middle is
- 13 destroyed, but the ends, you can still see the
- 14 green.
- 15 BY MR. LAFLAMME:
- 16 Q. And then you can see the brown coloring
- 17 on the carpet still, correct?
- 18 A. Yes.
- 19 Q. And you can see the treads on one tire
- 20 here in the first photograph, correct?
- 21 A. Yes.
- Q. And then if we go down, the second
- 23 photograph is more of a close-up of those treads,
- 24 correct?
- 25 A. Yes.

Page 105 1 And then here's an orientation where you Q. 2 can see the treads on the bottom of both tires, 3 correct? Α. Yes. Q. And these tires are rubber, correct? Α. Yes. Do you know what the melting point of Ο. 8 rubber is? Not offhand. 9 Α. 10 Do you know what the melting point is of Ο. 11 the plastic casing for the hoverboard? 12 Α. No. Is it -- it's a polymer product? 13 Ο. 14 Α. Yes. 15 Q. Have you been involved in any other 16 hoverboard fire investigations where you believed 17 the hoverboard was a cause of the fire but had a 18 similar appearance on the underside where you could 19 still see the color of the shell and the form of the 20 shell? I have not been -- so the other 2.1 Α. 22 hoverboard case where I assisted, I don't have any 23 recollection or knowledge of the condition of that 24 board, so...

The one other hoverboard case that you've

25

Q.

Page 106 1 worked on, did you ever see the board that was being 2 investigated to determine if it had failed? Or did you just see the exemplar? 3 Α. I just saw the exemplar, to my memory. Q. And your involvement with that exemplar 6 was coming up with a process to extract data from 7 it, correct? 8 Α. Yes. MR. LAFLAMME: I'm just going to save 9 10 this now, before I forget. 11 BY MR. LAFLAMME: Did you do any testing in this case 12 Q. 13 relative to the hoverboard? 14 Α. No. 15 (King Deposition Exhibit 80 marked.) 16 BY MR. LAFLAMME: 17 I'll hand you what's been marked as Q. 18 Exhibit 80. 19 And in Exhibit 80, this is from the CT 20 scan. Can you see the plug receptacle? Α. 21 Yes. And that's the barrel with three pins in 22 Q. 23 it? 24 Α. Yes. 25 And looking at the plug receptacle, there Q.

- 1 is no physical evidence that shows that anything was
- 2 plugged into that at the time of the fire, correct?
- 3 A. That's correct.
- 4 Q. In your analysis in this case, did you
- 5 ever do an assessment on any of the electrical
- 6 evidence that was identified in the smoking shed?
- 7 A. No.
- 8 Q. And I understand you haven't seen that
- 9 physical evidence. You also haven't seen the
- 10 photographs of the arcing that was present in the
- 11 smoking shed, correct?
- 12 A. Correct.
- 13 Q. Do you still have the exemplar
- 14 hoverboard?
- 15 A. Yes.
- 16 Q. And where is that maintained?
- 17 A. It's at our lab in the office.
- 18 Q. And understanding that you took apart the
- 19 exemplar hoverboard to a certain extent, why don't
- 20 you walk me through everything that you did with the
- 21 exemplar?
- 22 A. Well, it was really a disassembly to
- 23 document original orientation of the components.
- Q. So when you did the disassembly, you --
- 25 because it's encased in the plastic shell, the

- 1 hoverboard shell, correct?
- 2 A. Yes.
- 3 Q. Okay. You would have -- I believe it's
- 4 together with screws. Is that how it's secured?
- 5 A. Yes.
- 6 Q. All right. So you would have removed the
- 7 screws and then pulled apart the two -- the bottom
- 8 and the upper half of the shell?
- 9 A. Yes.
- 10 Q. And then within the shell, then you
- 11 obviously have the internal components, correct?
- 12 A. Right.
- 13 Q. And those are shown on page 8 of your
- 14 PowerPoint. And in looking at the internal
- 15 components, it looks like you removed the battery
- 16 pack.
- 17 A. Yes.
- 18 Q. Did you disconnect the battery pack or
- 19 did it remain connected? Meaning with the wires.
- 20 A. It was unplugged.
- 21 Q. And then when you removed the battery
- 22 pack, what did you do with it?
- 23 A. Well, I measured the polarity of the
- 24 cells and marked them, as we discussed earlier,
- 25 positive and negative. And that was primarily it as

- 1 an orientation.
- 2 Q. So it sounds like the main purpose of
- 3 getting the exemplar was to, number one, figure out
- 4 the configuration of the battery pack.
- 5 A. (Witness nods.)
- 6 O. Correct?
- 7 A. Yes.
- 8 Q. And then comparing that configuration to
- 9 the lithium-ion battery cells that were present in
- 10 the subject hoverboard?
- 11 A. Yes.
- 12 Q. And then you used that in order to come
- 13 up with a configuration of the cells that were
- 14 within the hoverboard by comparing it to the battery
- 15 pack.
- 16 A. Yes.
- 17 Q. And then you went through the labeling
- 18 process of labeling them 1 through 10?
- 19 A. Yes.
- 20 Q. And did anyone assist you with this
- 21 process?
- 22 A. Yes. I have an engineering assistant.
- Q. Who is that?
- 24 A. Samuel Lee.
- Q. Has Mr. Lee assisted in any other portion

- 1 of your investigation besides the exemplar
- 2 comparison?
- A. We reviewed the CT scans together when we
- 4 were identifying orientation of the subject cells.
- 5 Q. Was Mr. Lee's role with respect to this
- 6 process in a -- I assume an assistive role, since
- 7 he's an engineering assistant?
- 8 A. Yes.
- 9 O. The ultimate determination as to the
- 10 configuration of the battery cells, was that your
- 11 determination?
- 12 A. Yes. We -- you know, we discussed what
- 13 we were observing and came to an agreement that we
- 14 both saw the same thing.
- 15 Q. Any other aspect of your investigation
- 16 that Mr. Lee assisted with?
- 17 A. I don't believe so.
- 18 Q. Did you ever look at the subject
- 19 hoverboard on any other date other than the date we
- 20 were all at your location on -- in February of this
- 21 year?
- 22 A. Yes. I don't recall the date, but it
- 23 arrived at our office, and then we did a
- 24 documentation of -- kind of a standard evidence
- 25 arrival documentation, and then we sent it out

- 1 somewhere. I don't recall where.
- 2 Q. The CT scan was not done in-house at your
- 3 location, right?
- 4 A. Correct.
- 5 Q. When the hoverboard arrived at your
- 6 location, did you unwrap the hoverboard or did it
- 7 maintain -- or did it stay wrapped until our
- 8 inspection?
- 9 A. It -- I believe it was unwrapped.
- 10 Q. And when it was unwrapped, did you do any
- 11 specific inspection on the hoverboard at that time?
- 12 A. No. Only documentation. Photo
- 13 documentation.
- 14 Q. So you received the hoverboard. It was
- 15 received from Mr. Palmer's office, correct?
- 16 A. I couldn't say offhand.
- 17 Q. You received it from somewhere. Through
- 18 the intake process, you would have unwrapped it,
- 19 just done some general overview document --
- 20 photographs, correct?
- 21 A. Yes.
- 22 Q. And then it would have been provided to
- 23 whoever it was that you had do the CT scan?
- 24 A. Yes.
- Q. And then it would have been returned to

Page 112 1 BEAR? It was eventually, yes. And then we had our inspection in Ο. 4 February of '24. In between those two times, from when it 6 was initially taken in until the joint inspection in 7 February of '24, did you do any independent 8 inspections on this hoverboard? 9 Α. No. 10 Ο. Since February of '24, have you done any 11 independent inspections on this hoverboard? 12 No. Α. And the hoverboard, I presume, is still 13 Ο. 14 wrapped up at your location? 15 Α. It is. Before I get into your report, why don't 16 0. 17 we -- now is probably a good time to take a quick 18 lunch break. 19 Sure. Α. 20 (Recess taken, 12:33 p.m. to 21 1:14 p.m. PDT) 22 BY MR. LAFLAMME: We may have had some miscommunication 23 Q. 24 earlier on temperature, so I just want to run 25 through that whole process again.

Page 113 We had discussed what the temperature 1 2 would be for the contents that are being spilled out 3 of the internal portions of the cell as the short 4 circuit causes the cap to pop off. 5 Α. Right. Do you remember that line of questioning? Ο. Α. Yes. Q. Okay. And I had indicated that -- I had 9 asked you whether 1900 degrees Fahrenheit would be a 10 temperature that could be in the range when that 11 type of failure occurs. And you had indicated that 12 type of temperature was plausible, correct? 13 Α. Yes. As far as the specific range of 14 15 temperatures that you would expect to see on a 16 short-circuit-type failure as the contents are being 17 spilled out of the battery cell, I don't believe you 18 had a specific range for that; is that correct? 19 Α. Correct. 20 Q. And so as you sit here today, you aren't 21 able to give a specific range of what the 22 temperature would be of the contents spilling out of 23 the internal portions of the battery cell during a

24 short circuit failure other than the 1900-degree

25 Fahrenheit would be a plausible temperature.

- 1 A. Yeah. I could be a little more specific.
- 2 The contents could be a few hundred degrees Celsius.
- 3 The higher temperature, the 1900 that you suggested,
- 4 you know, that's going to come from the combustion
- 5 of the organic compounds as they come out, so...
- 6 Q. And just to break that down so that I --
- 7 I think I know what you're saying, but I want to
- 8 make sure I know what you're saying. The physical
- 9 contents that are being expelled, which I think has
- 10 sometimes been referred to as a jelly roll?
- 11 A. Yes.
- 12 Q. So the jelly roll contents, those
- 13 contents would be in the range of a few hundred
- 14 degrees Celsius, or could be.
- 15 A. Could be, yes.
- 16 Q. And when you say a few hundred degrees
- 17 Celsius, what range are you talking in that regard?
- 18 A. Two-, three-, 400, that type of range.
- 19 O. So somewhere in the two- to 400 Celsius
- 20 degree range for the physical content temperature?
- 21 A. Yeah.
- Q. Okay. And then for the combustion of the
- 23 contents that are being spilled, that's where you
- 24 can get a range of up to the 1900 degrees
- 25 Fahrenheit?

Page 115 1 Α. Right. Q. Okay. Yeah. Α. Ο. Yes? 5 Α. Yes. Okay. And we talked before about how, O. 7 when there is a short circuit of the nature that you 8 think occurred here, you have the spilled physical 9 contents but you also have combustion of those 10 contents in flame, correct? 11 Α. Yes. So it's the combustion of those contents 12 Q. 13 and the flame that gets up into the 1900-degree 14 Fahrenheit range. 15 Α. Yes. Ο. And did you look -- you did not look at 17 the melting temperature of any of the components 18 that would have been around the battery pack within 19 the internal portions of the hoverboard during your 20 assessment in this case, correct? 21 Α. Correct. And the tab that is inside the 18650 cell 22 Q. 23 that we looked at on the CT scan, I know you had 24 indicated that could be nickel. Was that one of the materials? 25

Page 116 1 Yes, just based on memory. Α. Okay. It could also be aluminum? Q. I believe it could, yeah. 3 Α. Ο. As you sit here today, do you know what 5 metal was used for the tab within the lithium-ion 6 battery cells for this case? Α. No. Q. Anything else besides nickel or aluminum 9 that it could be? 10 Α. Not that I recall. Do you know what the melting temperature 11 Ο. 12 is of aluminum? No, not offhand. 13 Α. 14 And then solder, we agreed, melts at Ο. 15 around 300 degrees Fahrenheit, correct? That sounds right. 16 Α. I think the actual range is 275 to 350. 17 Q. Does that sound accurate? 18 19 Α. That sounds good, yeah. 20 Q. And that's Fahrenheit as opposed to 21 Celsius? Yes. 22 Α. All right. I had -- while you guys were 23 Q. 24 out, we marked as Exhibit 81, your report. 25 (King Deposition Exhibit 81 marked.)

Page 117 1 BY MR. LAFLAMME: Q. And looking at your report, Exhibit 81, 3 this shows a date of July 12, 2024, in which it was 4 drafted, correct? Or at least completed. Yes. 5 Α. Did you maintain any draft reports? Ο. 7 Α. No. During your drafting process, do you meet Q. 9 with counsel before finalizing the report? 10 Α. Sometimes. Sometimes I will send a 11 draft, if -- but not always. Q. Do you know if you sent a draft in this 12 13 case? 14 Α. I don't recall. I don't think I did, 15 though. 16 Q. Has your primary contact in this case 17 always been Mr. Ayala? 18 Α. Yes. 19 Ο. Ever have any contact with an attorney 20 Greyson Goody? Α. 21 No. How about an attorney, Mr. Goldrosen, 22 Q. 23 from Morgan & Morgan? 24 Α. Yes.

25

Q. On this case?

Page 118 I -- maybe at the very beginning. Α. 2 not certain of that. You've worked with Mr. Goldrosen on some 3 Ο. 4 other cases, correct? 5 Α. Yes. And specifically the Onewheel cases, I Ο. 7 believe you worked with him on? 8 Α. Yes. All right. Going to page 3 of your 10 report, which is where the substantive part of it 11 starts, correct? 12 Α. Yes. The first part you just have a summary, 13 Ο. 14 and in the summary you indicate that only one of 15 five investigators that investigated this fire 16 determined that they couldn't rule out a fire 17 starting outside. Do you see that? 18 19 Α. Yes. 20 You have not reviewed Chief Erdmann's or 21 Chief Robinson's deposition testimonies, have you? 22 Α. I have not. Are you aware that Chief Erdmann 23 24 testified that he never came up with an origin 25 opinion?

- 1 A. No, I was not aware.
- 2 Q. Are you aware that Chief Robinson
- 3 indicated during his deposition that based on the
- 4 additional evidence about the smoking shed, that he
- 5 would need to investigate it further so that his
- 6 determination at the time was undetermined,
- 7 investigation -- further investigation required.
- Were you aware of that?
- 9 MR. AYALA: Form.
- 10 A. No.
- 11 BY MR. LAFLAMME:
- 12 Q. You have not read either Chief Robinson's
- 13 or Chief Erdmann's deposition testimony, though, in
- 14 that regard?
- 15 A. Correct.
- 16 Q. With respect to Ms. VanDongen, there's
- 17 the statement that she couldn't rule out a fire that
- 18 started outside the bedroom window, and then there's
- 19 a footnote number 2, which indicates call notes from
- 20 Angela Kelsey-Flowers.
- 21 Do you see that?
- 22 A. Yes.
- Q. Who is Angela Kelsey-Flowers?
- 24 A. I don't know.
- Q. So are these your call notes or are

- 1 these --
- 2 A. These are part of the materials provided
- 3 to me.
- 4 O. So it looks like there is a Salesforce
- 5 record in your file that contains this information,
- 6 and then it says that it was created by Angela
- 7 Kelsey-Flowers on December 20th, 2022.
- I think that's probably what you're
- 9 referring to.
- 10 A. Yes.
- 11 Q. Did you ever speak with Angela
- 12 Kelsey-Flowers about this note?
- 13 A. No.
- Q. So as far as you are aware, at this point
- 15 it was just a note that you had in your file about
- 16 Ms. VanDongen's conclusion about not being able to
- 17 rule out an outside fire?
- 18 A. Yes.
- 19 Q. Have you reviewed the Matterport scan in
- 20 this case?
- 21 A. No.
- Q. Have you done anything to assess the
- 23 potential of alternative causes of this fire outside
- 24 of the hoverboard?
- 25 A. No, I have not.

Page 121 And in looking at your file here, you 1 Q. 2 have some photographs -- or you have a section 3 called photos and videos, correct? And that was in 4 your document summary? Α. Yes. It looks like the photos and videos Ο. 7 are -- there are some pictures provided by the 8 client which show some injury photos, correct? 9 Α. Yes. And then there's the ESI, Daren Slee 10 Ο. 11 photos from the first site inspection, correct? 12 Α. Yes. And then there is a subfolder, just 13 Ο. 14 generically called Cause and Origin Investigation 15 Pics. 16 Do you know where that came from? 17 Α. No. Well, it was provided to me by counsel, 18 19 but... 20 Q. But, I mean, do you know who took those 21 photographs? 22 Α. No. And then in one of your other subfile 23 Ο. 24 folders, under Materials Received 6-20-24, that --25 it looks like there are some depo summary notes from

- 1 Ms. Kremers, who's the Walmart deponent, and
- 2 Mr. Husain, who was the Jetson deponent.
- 3 A. Yes.
- 4 Q. And those depo summaries, did you put
- 5 those together?
- 6 A. I did.
- 7 Q. And I do see the admin folder now with
- 8 the retainer agreement.
- 9 And at the time of the retainer
- 10 agreement, which would have been signed on
- 11 September 5, 2023, I assume that's when BEAR was
- 12 first engaged in this case?
- 13 A. Yes.
- Q. And it looks like you -- BEAR was engaged
- 15 by Attorney Goldrosen from Morgan & Morgan, correct?
- 16 A. Yes.
- 17 Q. And then at the time, your per-hour
- 18 expert fee was 175 per hour?
- 19 A. Yes.
- Q. Did that go up, then, this year?
- 21 A. For -- yes, for 2024.
- 22 Q. So at the turn of -- as of January 1,
- 23 2024, is that when it went up to 200?
- 24 A. Yes.
- Q. Looking at page 3 of your expert report,

- 1 you go on to state below the photographs that:
- 2 These batteries are known -- are a known fire
- 3 hazard, and UL standard 2272 was developed to help
- 4 address this hazard in devices such as the subject
- 5 board.
- 6 Do you see that?
- 7 A. Yes.
- 8 Q. So when you're saying these batteries are
- 9 a known fire hazard, and then UL 2272 was developed,
- 10 that standard was put together by UL to address the
- 11 prior fire hazards that were involved with earlier
- 12 lithium-ion battery products, correct?
- 13 A. Yes. My understanding is that standard
- 14 addresses, like, personal mobility devices. You
- 15 know, where I say these batteries are a known fire
- 16 hazard, that's based on a broader application of the
- 17 batteries.
- 18 O. And understanding UL 2272 is the overall
- 19 standard that hoverboards fall under, correct?
- 20 A. Right.
- Q. And there's not anything that you've done
- 22 in this case that has identified a deviation from
- 23 the UL 2272 standards, correct?
- MR. AYALA: Form.
- 25 A. Not specifically, no.

- 1 BY MR. LAFLAMME:
- Q. Just to be real clear, is there any
- 3 aspect of this hoverboard that you believe deviated
- 4 from UL 2272 standards?
- 5 MR. AYALA: Form.
- 6 A. No, other than I believe it's more likely
- 7 to be a source of fire, but...
- No, I haven't reviewed the design
- 9 documentation for this board.
- 10 BY MR. LAFLAMME:
- 11 Q. You haven't reviewed the design
- 12 documentation or any of the UL test records for this
- 13 hoverboard, correct?
- 14 A. Correct.
- 15 Q. And you haven't reviewed any of the UL
- 16 test records for the battery cells in this
- 17 hoverboard, correct?
- 18 A. Correct.
- 19 Q. On page 4 of your report, it goes through
- 20 materials reviewed, and those are all of the
- 21 materials that you had reviewed at the time of your
- 22 report, correct?
- 23 A. Yes.
- Q. And then the only additional material
- 25 that you've reviewed was skimming through Detective

- 1 Sheaman's deposition transcript this weekend?
- 2 A. Yes.
- 3 Q. And nothing else that you've reviewed,
- 4 correct?
- 5 A. Correct.
- 6 Q. Going to page 5 in your report. I think
- 7 we talked about this photograph during your
- 8 PowerPoint exhibit. And it looks like your
- 9 PowerPoint exhibit somewhat tracks your report,
- 10 correct?
- 11 A. Yes.
- 12 Q. So looking at Figure 3 on page 5, that
- 13 shows the interior wood consumption in the studs
- 14 between the hallway and the bedroom, correct?
- 15 A. Yes.
- 16 Q. And although you have it labeled as a V
- 17 pattern, you aren't testifying that that is indeed a
- 18 V pattern under your investigation, correct?
- 19 A. Correct. It just resembles a V visually.
- 20 Q. But you aren't stating with respect to
- 21 your investigation that what we're looking at here
- 22 in Figure 3 on page 5 of your report is a V pattern
- 23 under NFPA 921, correct?
- 24 A. Correct.
- Q. And then Figure 4, we also talked about

Page 126 1 that on your PowerPoint, correct? Α. Yes. And then we talked about the three Ο. 4 bullets points which mirror your PowerPoint on 5 page 6 of your report as well? Α. Yes. In looking at Figure 5, page 7 of your Ο. 8 report, this is just an overview of the damaged 9 hoverboard, correct? 10 Α. Yes. And then on the right side, you -- in Ο. 12 between the batteries and the wheel, you can see 13 that colored insulation a little bit on the wiring, 14 correct? 15 Α. Yes. 16 Q. If you could go to page 10. 17 On the last paragraph of Section 5, you 18 say: A more detailed root cause analysis may be 19 performed after additional documentation has been 20 provided for the Plasma board, battery pack and 21 battery cells. 22 Do you see that? 23 Α. Yes.

What additional documentation were you

24

Ο.

25 looking for?

- 1 A. If we wanted to do this type of analysis,
- 2 it would be product specifications for the board and
- 3 the cells, and the battery pack. It would be the
- 4 test reports for the cells and battery pack, as well
- 5 as the hoverboard overall.
- 6 So that would be like UL reports. I
- 7 believe there's an IEC standard as well.
- 8 Yeah. Any -- if Jetson did any FMEAs for
- 9 this board or components, I would want to see those
- 10 also.
- 11 Q. The UL test standards for the hoverboard
- 12 and the battery cells and battery pack, those mirror
- 13 what an FMEA process would be, correct?
- MR. AYALA: Form.
- 15 A. I don't think so, no.
- 16 BY MR. LAFLAMME:
- 17 Q. Okay. So you think an FMEA would be
- 18 different from what the UL test requirements are?
- 19 A. Yeah. It's -- it's a different process.
- 20 I mean, you know, some of the factors, which you
- 21 come up with or, you know, Jetson would come up with
- 22 in their FMEA, may be addressed in the standards,
- 23 but that -- it's not -- they're not the same thing.
- Q. Do you know if -- did Jetson manufacture
- 25 this hoverboard?

- 1 A. I don't know the manufacturer, how that
- 2 relates to the Jetson name.
- 3 Q. Do you know if Jetson designed the
- 4 hoverboard and its components?
- 5 A. I don't -- I don't recall. I believe
- 6 Mr. Husain addressed that, but...
- 7 O. You are aware that Mr. Husain testified
- 8 that the manufacturer is a Chinese company, correct?
- 9 A. I just -- I don't recall specifically,
- 10 but that sounds plausible.
- 11 Q. And that the Chinese manufacturer was the
- 12 one that designed the hoverboard, other than some
- 13 aesthetic portions that Jetson had some input in.
- 14 Do you recall that testimony?
- 15 A. No, not specifically, no.
- 16 Q. Did you read all of Mr. Husain's
- 17 deposition?
- 18 A. I did, yes.
- 19 Q. When was the last time you read it?
- 20 A. That would be prior to this report.
- Q. Obviously, Mr. Husain's testimony will
- 22 speak for itself, but you don't have any evidence
- 23 that Jetson designed or manufactured this
- 24 hoverboard, correct?
- 25 A. Correct.

Page 129 Jetson imported this hoverboard from a 1 Q. 2 Chinese manufacturer, and then sold it, in this 3 case, through Walmart. MR. AYALA: Form. 5 BY MR. LAFLAMME: 6 Is that your understanding? Ο. That's my understanding, yeah. Α. Q. So looking at Section 6, which is your 9 Design and FMEA Risk Assessment section, on page 10, 10 11, and 12, this section of your report looks almost 11 identical to other FMEA reports that BEAR has put 12 out. 13 Α. Yes. Okay. And so this is, at least that 14 15 portion of Section 6 -- and understanding you go 16 into the specifics on this case a little at the end 17 of it, but on page 10, 11, and 12, those are all 18 common background FMEA information that you have put 19 in other reports as well --20 Α. Yes. 21 Ο. -- correct? 22 Α. Yes.

And BEAR has put in a number of reports?

So with respect to the specific criticism

23

24

25

Q.

Α.

Q.

Yes.

Page 130 1 that you have on the FMEA side, we're really just 2 looking at this last paragraph on page 13 where it 3 says: Jetson should have conducted an FMEA or other 4 risk assessment to eliminate unnecessary risks as 5 part of their design process. Correct? Α. Yes. O. And in this case, your primary concern 8 would be with the battery cells, since that's what 9 you believe failed, correct? 10 A. Yes. (King Deposition Exhibit 82 marked.) 11 12 BY MR. LAFLAMME: Q. Hand you what's been marked as 13 14 Exhibit 82. 15 And looking at Exhibit 82, have you seen 16 these types of documents before? Not in this case. 17 Α. Q. Okay. Are you familiar with them 18 19 generally? 20 Α. I believe I have seen these before in 21 other cases. Q. Okay. What other cases? 22 I believe there was a scooter case, but 23 Α. 24 it's not something I've seen often.

Q. Okay. Well, looking at Exhibit 82, you

- 1 can see that it bears the Bates number JETSON 322 on
- 2 the first page.
- 3 Do you see that?
- 4 A. Yes.
- 5 Q. Okay. Indicating this has been a
- 6 document that's been produced in this case. But
- 7 this is the first time you've seen it, correct?
- 8 A. Yeah, it is.
- 9 Q. In looking at Exhibit 82, you can see
- 10 Test Record No. 1, where it says: Samples of the
- 11 personal e-mobility devices, models -- and then it
- 12 says, colon, Plasma. As indicated below and
- 13 constructed as described herein, were selected and
- 14 submitted by the manufacturer for examination and
- 15 test to representative of all models.
- 16 Do you see that?
- 17 A. Yes.
- 18 Q. So the test process included some samples
- 19 of the Plasma model hoverboard, correct?
- 20 A. Yes.
- 21 Q. And if you look at the first page, and
- 22 you go down to the battery and cell configuration
- 23 for scooters, you can see that we have our same cell
- 24 model, the INR18650P 9.0 watt-hours.
- 25 \* \* \*

- 1 A. Yes.
- Q. And that's the same battery that is used
- 3 in the Plasma model, correct?
- 4 A. Yes.
- 5 Q. And then if you go to page 2, you can see
- 6 that there are a number of tests that were conducted
- 7 on this hoverboard.
- 8 Do you see that?
- 9 A. Yes.
- 10 Q. And one of them is a short-circuit test,
- 11 correct?
- 12 A. Yes.
- 13 Q. And a short-circuit issue is the specific
- 14 issue that you believe was the concern with cells 4
- 15 and 10 in the subject hoverboard?
- 16 A. The short-circuit issue that I was
- 17 concerned about is internal to the battery.
- 18 Q. Okay. So is the short-circuit issue
- 19 that's being tested here, do you believe that that's
- 20 different than internal to the battery?
- 21 A. Yes.
- Q. Where is the short-circuit issue that's
- 23 being tested for this?
- 24 A. Let's see. I am looking for that
- 25 information.

Page 133 [Document review.] 1 I don't know if I'm just missing it, but Α. 3 I -- when I look through this, I don't see any 4 information on that short-circuit test. 5 BY MR. LAFLAMME: You think that that short-circuit test 0. 7 may be different -- a different test than what is 8 the short circuit that you have a concern about in 9 this case? 10 Α. Yes. I believe it's a short circuit 11 external to the cell. Going to the last page of this 12 Q. 13 JETSON 332, there's a Conclusion section. 14 Do you see that? 15 Α. Yes. 0. And then it says: The product covered by 17 this report has been found to comply with the 18 requirements covering the category and the product 19 is found to comply with UL's applicable 20 requirements. 21 Do you see that? 22 Α. Yes. And that's an indication that the Plasma 23 Ο. 24 model, as tested, met the applicable UL 25 requirements, correct?

- 1 MR. AYALA: Form.
- 2 A. Yes.
- 3 BY MR. LAFLAMME:
- 4 Q. To get the 2580 UL certification for a
- 5 lithium-ion battery cell, do you know what the test
- 6 process is?
- 7 A. I don't recall that offhand. Yeah, I
- 8 don't recall all the steps offhand.
- 9 Q. Do you recall any of the steps?
- 10 A. The standard that I was once familiar
- 11 with included crush tests, piercing tests,
- 12 short-circuit tests with a specified resistance,
- 13 temperature-related tests.
- 14 Q. So the testing to get a 2580
- 15 certification would include a short-circuit test on
- 16 the battery cell, correct?
- 17 A. And -- yes, an external short.
- 18 Q. You don't think they would test an
- 19 internal short circuit at all?
- 20 A. No.
- Q. And what are you basing that on?
- 22 A. Well, internal shorts are caused by a
- 23 breakdown in the separator. So, I guess, it -- you
- 24 know, I should say an internal short could be tested
- 25 in some way through a piercing test, possibly, and

Page 135 1 exposure to high enough temperature to melt and 2 shrink the separator. So it -- those types of tests could be --3 4 could include internal shorting. So internal shorting is tested to a 6 certain extent in order to get the UL 2580 7 certification for a battery cell, correct? 8 A. I believe it is, yeah. And are you aware of who's on the roster 10 for 2580 in coming up with the test standards? 11 Α. No. Did the -- the FMEA process, that derived 12 Q. 13 from the US military; is that where it was first 14 utilized? 15 Α. Yeah. Yeah, if I recall their history 16 and background correctly. 17 Q. Are you aware that the U.S. Army is a 18 governmental member of the 2580 standards committee? 19 Α. No. 20 Q. And the U.S. Consumer Protection Safety 21 Commission is a member of the 2580 committee? 22 You're not aware of that? 23 Α. No. 24 (King Deposition Exhibit 83 marked.) 25

Page 136 1 BY MR. LAFLAMME: Q. I'll hand you what's been marked as 3 Exhibit 83. And up top you can see in the left-hand 5 side that it says TC, which I understand stands for 6 technical committee. Is that your understanding as 7 well? A. That sounds right. O. And so this is the technical committee 10 roster for UL 2580 batteries for use in electric 11 vehicles. Do you see that? 12 A. Yes. 13 O. And 2580 is the test standard that 14 15 applies to the batteries utilized in the Plasma 16 hoverboard? 17 Α. Yes. Q. And you can see that the U.S. Army is a 18 19 member of the technical committee, correct? 20 A. Where is that? Q. It's about halfway down on the first 21 22 page. Oh, yes. 23 Α.

Yi Ding, Y-I, D-I-N-G, is the individual

24

Ο.

25 from the U.S. Army.

Page 137 1 Do you see that? Α. Yes. And then further down on that page you Ο. 4 can see that the U.S. Consumer Protection Safety 5 Commission is a member as well? Α. Yes. And then if you go to the second page, Ο. 8 CSA Group, which is the Canadian standards 9 association, they are a member as well? 10 Α. Yes. Q. Okay. And these are all the individuals 12 that come together to put together the test 13 standards for UL 2584 lithium-ion battery cells 14 that -- for use in electric vehicles, which includes 15 hoverboards in this case, correct? 16 Α. Yes. 17 (King Deposition Exhibit 84 marked.) 18 BY MR. LAFLAMME: Q. Mr. King, I'll show you what's been 20 marked as Exhibit 84. 21 And this is the front page of the UL 2580 22 standard, correct --23 A. Yes. 24 Q. -- on page 1. And then on page 2 -- or, 25 sorry, page 12 and 13, it talks about standards that

- 1 are -- other standards that are incorporated into
- 2 this standard, correct?
- 3 A. That appears to be the case.
- 4 O. You're familiar with UL codes, or UL
- 5 standards, correct?
- 6 A. In general, yes.
- 7 Q. And then at the beginning of each UL
- 8 standard, they list a number of other standards that
- 9 are incorporated into that standard, correct?
- 10 A. Right.
- 11 Q. That's a pretty standard -- typical
- 12 process for the UL standards, correct?
- 13 A. Yes.
- 14 Q. And then if you look at page 13 under the
- 15 SAE standards, do you know what SAE stands for?
- 16 A. So it was Society of Automotive
- 17 Engineers.
- 18 Q. Okay. Under SAE J1739, you can see that
- 19 there's a design and process FMEA that is actually
- 20 incorporated into 2580.
- 21 Do you see that?
- 22 A. Yes.
- Q. So 2580, for the battery cells
- 24 themselves, goes through an FMEA-type test process
- 25 in order to get that certification, correct?

- 1 MR. AYALA: Form.
- 2 A. Maybe. I really -- I don't know the
- 3 details of how this SAE standard is incorporated
- 4 into 2580 or how it informed 2580's contents.
- 5 BY MR. LAFLAMME:
- 6 Q. Okay. But as we sit here today, you
- 7 don't know at all what the test process is in order
- 8 to get a 2580 certification, correct?
- 9 A. No, I'm not very familiar with this
- 10 standard.
- 11 Q. And you don't know how the test process
- 12 for UL 2580 would or would not differ in any way
- 13 from an FMEA, correct?
- 14 A. Well, no. The -- doing a test process
- 15 is -- you follow steps, you know, perform certain --
- 16 perform certain tests, collect data.
- 17 That's one type of process. Performing
- 18 an FMEA is a different type of process. It's not --
- 19 so performing an FMEA is -- a lot of it is a thought
- 20 and documentation process where, you know, the
- 21 interested parties figure out failure modes and rate
- 22 them and risk severity/occurrence, and then tend to
- 23 figure out root causes.
- 24 So that's an FMEA process. And then, of
- 25 course, that gets updated by real-world data, so,

- 1 you know, consumer complaints, incidents, anything
- 2 that could drive a re-evaluation of what's already
- 3 been laid out.
- 4 Q. Well, in your report here at page 13, you
- 5 reference FMEA or other risk assessment to eliminate
- 6 unnecessary risks as part of their design process.
- 7 Do you see that?
- 8 A. Yes. Mm-hmm, I do.
- 9 Q. When you say "their" design process,
- 10 whose design are you talking about?
- 11 A. Well, when I wrote this, I mean, the
- 12 only -- the only name I was really familiar with was
- 13 Jetson, so, you know, at the time in my mind, it
- 14 would -- it was Jetson who would do it.
- 15 Q. Do you have any information as to what
- 16 FMEA or other risk assessment process may have been
- 17 adopted by the manufacturer for this hoverboard?
- 18 A. I don't have that information.
- 19 Q. But you are aware that the battery cells
- 20 that were utilized in this hoverboard were UL
- 21 certified, correct?
- 22 A. Yes.
- Q. And would have gone through the UL test
- 24 process to get that UL 2580 certification.
- 25 A. Yes.

- 1 MR. AYALA: Form.
- 2 BY MR. LAFLAMME:
- 3 Q. And you are aware that the hoverboard in
- 4 this case was UL 2272 certified, correct?
- 5 A. Yes.
- 6 Q. And would have had to go through the
- 7 UL 2272 test process to obtain that certification.
- 8 A. Yes.
- 9 Q. And the UL test process in order to
- 10 obtain UL certification is done to identify whether
- 11 the product has certain risks that need to be
- 12 addressed on design, correct?
- 13 A. Yes.
- Q. With respect to the battery cells in this
- 15 case, there were not any battery cells that failed
- 16 along the end walls, correct? Or the side walls,
- 17 sorry.
- MR. AYALA: Form.
- 19 A. I think I would want to take a look at a
- 20 picture.
- Oh, wait. What do you mean by side
- 22 walls?
- 23 BY MR. LAFLAMME:
- Q. The tube.
- 25 A. Oh, like a -- for example, like a

Page 142 1 puncture? Is that what you mean? A puncture or that there was a -- some 3 sort of a blowout on a side wall. Α. Right. Yeah, I didn't see any side wall 5 failures. This is going to be a terrible analogy, Ο. 7 but when you put a microwave in a hot dog, how it --8 you get a big crack along the length of the hot dog? Α. Right. 10 Picture that being the lithium-ion Ο. 11 battery cell. There was not any separating along --12 of the side wall of any of the battery cells, 13 correct? 14 MR. AYALA: Let me just object to the 15 form. And I think he meant it in the inverse. You put the hot dog in the microwave, not the 16 17 other way around. MR. LAFLAMME: Oh, did I say --18 19 MR. AYALA: It would be hard to put a 20 microwave in the hot dog. Although, nowadays, who knows what they put in them. 21 22 MR. LAFLAMME: Yeah, duly noted. 23 That's probably a valid objection, so --24 MR. AYALA: But you understood what 25 he was asking you?

Page 143 Yeah, I didn't observe any failures as Α. 2 you described. 3 BY MR. LAFLAMME: Ο. Okay. And the only two cells that had 5 any failures in which they expelled their contents 6 were cells 4 and 10, correct? Α. Yes. Q. Did you -- you have not done any -- or 9 strike that. 10 Are you aware of any circuit breakers --11 were there any circuit breakers tripped in this 12 house? Not as I sit here. I don't remember any. 13 Α. 14 And circuit breakers will often trip Ο. 15 during a fire when the circuit that it is protecting 16 is energized and impacted by fire? 17 MR. AYALA: Form. 18 Α. Yes. Yes, they can -- they -- I don't 19 know that they always do, but certainly they can, 20 yes. 21 BY MR. LAFLAMME: 22 With respect to cells 4 and 10, you Q. 23 believe -- and I'll use your words -- I think you

24 used that those cells would have failed near

25 simultaneously, correct? In your --

- 1 A. Approximately, yeah.
- 2 Q. And with respect to such a failure with
- 3 regards to a short circuit, the only way the short
- 4 circuit can occur is if the separator has a failure
- 5 within the internal cell, correct?
- 6 A. For an -- yes, for an internal short.
- 7 Q. And that's what we're talking about here
- 8 is an internal short, correct?
- 9 A. Yes.
- 10 Q. And then how long, once the separator
- 11 fails and there's an internal short, how long does
- 12 it take for the cell to expel through its end cap?
- 13 A. The time varies, but it can be on the
- 14 order of a few minutes.
- 15 Q. A few minutes would be on the high end or
- 16 on the average side?
- 17 A. That would be on the high end.
- 18 O. And then what's on the low end? Seconds?
- 19 A. Seconds, yeah.
- 20 Q. Have you done any -- let me take a step
- 21 back.
- I assume you have not done any assessment
- 23 as to, if the fire had started at the hoverboard,
- 24 how the two boys that were in that room were able to
- 25 escape uninjured, correct? You haven't done any

- 1 fire analysis in that regard?
- 2 A. Correct.
- 3 Q. And with respect to your work in this
- 4 case, you were really just focused on the hoverboard
- 5 and that's it, correct?
- 6 A. Yes.
- 7 Q. Have you ever spoken with anyone from the
- 8 Wadsworth family?
- 9 A. No.
- 10 Q. Have you ever spoken with any witnesses
- 11 in this case?
- 12 A. No.
- 13 Q. Has your only contact in this case been
- 14 with individuals with Morgan & Morgan?
- 15 A. Yes. And, of course, at the inspection.
- 16 Q. Sure. When we were there at the joint
- 17 inspection?
- 18 A. Yes.
- 19 Q. Do you know what temperature carpeting
- 20 starts to melt at?
- 21 A. No.
- 22 Q. Is there any additional work that you
- 23 plan to do in this case?
- 24 A. Not -- not that I plan at this time. Not
- 25 unless I'm asked to.

Page 146 What did you do to prepare for today's 1 Q. 2 deposition? Α. I reviewed my report. I looked through 3 4 the photographs that were provided to me. I looked through the PowerPoint. 5 I skimmed through Sheaman's deposition 7 over the weekend. That was -- yeah, those were the 8 things I looked at. Did you meet with counsel at all? 9 10 Α. No. We -- we didn't meet until today. Did you meet this morning before your 11 Ο. 12 deposition? Yeah. We met over in the lobby. 13 Α. How long did you guys meet for? 14 Ο. 15 Α. Five, ten minutes maybe. Did you review any documents in 16 Q. 17 preparation for your deposition? With counsel or --Α. 18 19 Ο. Correct. Yeah. 20 Α. No. You already talked about some of the 21 Ο. 22 documents that you reviewed generally lead up to 23 today --24 Α. Yes. 25 Q. -- correct?

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Page 147
 1
        Α.
              Yes.
                  MR. LAFLAMME: I'll go through my
 2
         notes here, but I think I'm probably done.
 3
                                                      Ι
 4
         don't know if Mr. Ayala has any follow-up or
 5
         not.
                              I have a few. I quess
 6
                  MR. AYALA:
 7
         let's go off the record for a minute just so I
 8
         can try and organize my notes.
 9
                  (Recess taken, 2:11 p.m. to
10
                  2:17 p.m. PDT)
11
12
                        EXAMINATION
13
14 BY MR. AYALA:
15
        Q. Mr. King, I have some follow-ups with
16 you. And bear with me, I'm going to be jumping
17 around a little bit. And I'd like to start out
18 where Mr. LaFlamme left off, if I could.
19
              He was discussing with you Exhibits 84,
20 which purports to be the ANSI/CAN/UL/ULC 2580 for
21 the year 2022, Standard For Safety, as well as
22 Exhibit 82, which purports to be the UL FMEA testing
23 relating to the Plasma.
24
              Do you recall reviewing those a little
25 bit ago?
```

- 1 A. Yes.
- Q. With regards to Exhibit 84, if you turn
- 3 to page, I guess 12 -- it's listed as 12.
- 4 At the very top, same line that it
- 5 mentions the page, on the right-hand side, do you
- 6 see it says June 28, 2022?
- 7 A. I see.
- 8 Q. You are aware of the date of our incident
- 9 that we're here about today?
- 10 A. I believe it was February 2022.
- 11 Q. The contents of Exhibit 84, are you
- 12 familiar or knowledgeable as to whether or not they
- 13 were applicable to the full extent represented to
- 14 you in this exhibit on the date of incident?
- 15 A. I'm not aware of what changes --
- 16 Q. Okay.
- 17 A. -- existed, you know, prior to this
- 18 update.
- 19 Q. You haven't been showed, for purposes of
- 20 today's deposition, any standard applicable on the
- 21 date of incident, correct?
- 22 A. I don't believe so.
- 23 Q. You were shown Exhibit 82, which
- 24 purported to be the FMEA relating to this particular
- 25 model, the Plasma model.

- 1 And by the way, you mentioned a few
- 2 times, undertaking the investigative portion of at
- 3 least your scope and your role in this case, at all
- 4 times did you assume Jetson to be the manufacturer
- 5 of this hoverboard?
- 6 A. I did, until reading Mr. Husain's
- 7 deposition, yes.
- 8 Q. So, in other words, you had the benefit
- 9 of Mr. Husain's deposition to learn that it was in
- 10 fact manufactured in China?
- 11 A. Yes.
- 12 Q. Do you know if consumers have that same
- 13 benefit?
- 14 A. I'm not aware how easily that's knowable.
- 15 Q. Can we at least agree that as you looked
- 16 at not just the hoverboard related to this case, but
- 17 also the exemplar, that the hoverboards are marked
- 18 with the Jetson name and logo?
- 19 A. Yes, I did see that.
- 20 Q. Looking at Exhibit 82, did you find
- 21 anywhere in the exhibit presented to you the testing
- 22 for the 2580 relating to this Plasma?
- 23 A. From -- not in Exhibit 82. There's a
- 24 list of tests done, but they're all for 2272.
- Q. Okay. And as you discussed earlier, the

Page 150 1 testing for the 2272 UL, quote/unquote, standard, 2 does not test for internal shorting; is that 3 correct? Α. I don't believe it does, no. By the way, if you turn to the last page, Q. 6 that at least a portion of the conclusion was read 7 to you. 8 Α. Okay. It states: A sample of the product Ο. 10 covered by this report has been found to comply with 11 the requirements covering the category, and the 12 product is found to comply with UL's applicable 13 requirements. 14 And then the next sentence says: 15 description and test result in this report are only 16 applicable to the samples investigated by UL. 17 Do you see that? 18 Α. Yes. 19 In other words, however many samples were Ο. 20 tested and investigated by UL, this FMEA reporting 21 relates to those samples, correct? 22 Α. Yes. Is that how you read it and interpret it? 23 Q.

That's what the words say, yes.

Okay. Can we at least agree that as it

24

25

Α.

Q.

Page 151 1 relates to Jetson hoverboards, and in particular, 2 the Plasma model, not every unit is tested against 3 the UL standards, whether it's 2272 or 2580? MR. LAFLAMME: Object to form. Α. I think that's a likely -- that's likely 6 to be true. 7 BY MR. AYALA: Q. In other words, what is at least 9 demonstrated by Exhibit 82 is that there is a sample 10 of this particular model that is tested. Not every 11 unit within that model is actually tested, fair? 12 Yes. Α. You've not received, reviewed, or looked 13 O. 14 at anything that would lead you to the conclusion 15 that the Wadsworth hoverboard was a specific unit 16 tested against the UL standards? 17 Α. Correct. Is it your understanding, based on your 18 Ο. 19 background, training, and experience, that 20 hoverboards offered for sale in the United States 21 currently must be UL 2272 listed or tested? That's my understanding, yes. 22 Α.

Would that have been the case in 2023 as

25 A. Yes.

Q.

23

24 well?

- 1 Q. Opposing counsel brought up with you a
- 2 little bit earlier in your deposition another Jetson
- 3 hoverboard model known as the Rogue.
- 4 A. Mm-hmm.
- 5 Q. Do you remember that?
- 6 A. Yes.
- 7 Q. Based upon either your work related to
- 8 this case or any other cases that you've been
- 9 involved with dealing with hoverboards, did you come
- 10 to learn that the Jetson Rogue hoverboard or scooter
- 11 was in fact recalled back in 2023?
- 12 A. Yes.
- 0. And that there was a recall notice that
- 14 was posted and put out by the Consumer Product
- 15 Safety Commission, correct?
- 16 A. Yes.
- 17 Q. And in fact, the Consumer Product Safety
- 18 Commission, they are one of the TCs on Exhibit 83
- 19 that opposing counsel showed you?
- 20 A. They are.
- 21 Q. At some point in time did you review the
- 22 recall notice of the Jetson Roque?
- 23 A. I did.
- Q. Did you come to learn that the Jetson
- 25 Rogue was a scooter offered for sale with the name

1 of Jetson and it was at least identified as being UL

- 2 certified?
- 3 A. Yes.
- 4 Q. UL listed under 2272?
- 5 A. Correct.
- 6 Q. And the lithium-ion battery under 2580?
- 7 A. That one, I didn't see that specifically.
- 8 Q. Assume with me that it was.
- 9 A. Okay.
- 10 Q. How does a hoverboard put out by Jetson,
- 11 UL 2272 and UL 2580 rated and certified, how is that
- 12 recalled due to a potential for fire hazard?
- MR. LAFLAMME: Object to form.
- 14 A. Well, the cause of fire must not be
- 15 adequately covered by the testing standards in order
- 16 for that to occur.
- 17 BY MR. AYALA:
- 18 Q. In other words, products that are UL 2272
- 19 and UL 2580 rated and certified can still be a risk
- 20 of fire?
- 21 MR. LAFLAMME: Object to form.
- 22 A. That appears to be the case, if that's
- 23 what occurred with the Rogue, and to the extent that
- 24 that occurred here.
- 25 \* \* \*

1 BY MR. AYALA:

- Q. And in fact, in the recall notice put out
- 3 by the CPSC, they cited to incidents relating to
- 4 that particular model, and one of them involving a
- 5 10-year-old and a 15-year-old who died in a fire in
- 6 Pennsylvania in April of 2022.
- 7 Do you remember reviewing that when you
- 8 looked at the recall notice?
- 9 A. I didn't recall that specifically.
- 10 Q. And it was determined in that case, which
- 11 led to the recall, that the Jetson Rogue was the
- 12 point of origin of the fire directly in the CPSC
- 13 recall notice.
- 14 Do you recall seeing that?
- 15 A. Yes.
- 16 Q. They went on to state: There have been
- 17 multiple other reports of the recalled scooters and
- 18 hoverboards burning, sparking or melting, several of
- 19 which involved reports of flames.
- 20 Do you recall seeing that in the recall
- 21 notice put out by the CPSC?
- 22 A. Yes.
- 23 Q. And so even though a product, including
- 24 the Plasma in this case, is UL 2272 and UL 2580
- 25 rated or certified, that does not prevent the

Page 155 1 occurrence of an internal short or some other 2 malfunction that could lead to a fire hazard. Do you agree with that? 3 MR. LAFLAMME: Object to form. Α. Yes. I agree that meeting the standards 6 is not a guarantee. 7 BY MR. AYALA: Q. By the way, you were shown Exhibit 83 9 with a list of the TCs. What does TC stand for 10 again? 11 Technical committee. Α. Q. Was Jetson on there? 12 13 [Document review.] I don't see it on here. 14 Α. 15 BY MR. AYALA: 0. Were you shown any document by opposing 17 counsel of the testing, the FMEA testing performed 18 relating to the Plasma to comply with this 2580 UL 19 standard? 20 [Document review.] 21 Α. No. So it appears that Exhibit 74 is at least 22 23 related to 2580. 24 BY MR. AYALA: 25 Okay. So let's look at that together. Q.

Page 156 Okay. Refer me to the page, please? 1 The second page, 0312. Α. Okay. And what is -- what is Exhibit 74? Ο. What is your understanding of what this 5 document is? Α. This is a test report from a UL 7 laboratory, and the description is that it's 8 authorizing the manufacturer -- it's just 9 authorizing the manufacturer to reproduce the report 10 for purposes in the conclusion. 11 But it appears to be a test report of the 12 individual cell. Okay. Does this test report describe the 13 Ο. 14 UL 2580 specific requirements as it relates to 15 testing of those individual cell components?

- 16 A. Let's see. So on 0314, they have marked
- 17 2580 Appendix B.
- 18 Q. What is Appendix B?
- 19 A. I'm not familiar with Appendix B.
- 20 Q. Okay.
- 21 A. The remainder of this report appears to
- 22 be descriptive, so capacities, dimensions. There
- 23 are temperature ranges, markings. The last page is
- 24 also construction, composition.
- Q. Okay. So my question is, does anything

- 1 in Exhibit 74 outline the individual tests performed
- 2 on the battery cell components to ensure its
- 3 compliance with 2580 in its entirety?
- 4 A. No.
- 5 Q. Have you been shown any document that
- 6 relays that type of information specifically as it
- 7 relates to the battery cells in the Plasma battery
- 8 pack?
- 9 A. No.
- 10 Q. Who created this report?
- 11 A. I'm not certain. Possibly UL LLC.
- 12 That's who is claiming the copyright.
- 13 Q. So have you seen or been shown today any
- 14 specific testing performed either by Jetson or on
- 15 behalf of the Jetson hoverboard by the manufacturer
- 16 listed on page 1 of Exhibit 74 that pertains to the
- 17 Plasma battery cells?
- 18 A. No. No, this document does not contain
- 19 testing.
- 20 Q. The front page of 74 states: UL LLC
- 21 authorizes the above-named company -- I'm assuming
- 22 it's the Jiangxi Jiuding Power New Energy Technology
- 23 Co., Ltd. -- the named company to reproduce this
- 24 report only for purposes as described in the
- 25 Conclusion.

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Page 158
              Does 74 contain a conclusion, at least as
 1
 2 it's been presented to you?
              No, it does not.
 3
        Α.
        Ο.
              So you don't know what that conclusion
 5 provides or states relating to this UL 2580 and this
 6 named company?
        Α.
              I do not.
        Q.
              The second sentence of that paragraph
 9 says: The report should be reproduced in its
10 entirety.
11
              Do you believe that it was produced in
12 its entirety since it's missing a conclusion?
13
        Α.
              No.
                  MR. AYALA: By the way, for the court
14
15
         reporter's benefit, the named company is
         J-I-A-N-G-X-I, and then Jiuding is
16
         J-I-U-D-I-N-G, hyphen, Power, and the rest of
17
         the name that I read off.
18
19
                  I was brave enough to try it.
20
                  MR. LAFLAMME: It was a good effort.
21
                  MR. AYALA: It was. I'm sure I fell
22
         short.
23
                  MR. LAFLAMME: I couldn't tell you
24
         how accurate it is, though.
25
```

1 BY MR. AYALA:

- 2 Q. You were asked questions by opposing
- 3 counsel relating to whether or not you've ever
- 4 worked for companies that design or manufacture
- 5 lithium-ion batteries.
- Do you remember some of that early on?
- 7 A. Yes.
- 8 Q. And your response was no, correct?
- 9 A. Correct.
- 10 Q. And despite not having worked for such
- 11 companies, in your past and in your experience, you
- 12 have had exposure to lithium-ion batteries where
- 13 you've been called to inspect and investigate and
- 14 analyze those types of batteries. Is that fair?
- 15 A. Yes.
- 16 Q. Obviously, this is one of those cases.
- 17 You mentioned another hoverboard case you were asked
- 18 to assist with?
- 19 A. Yes.
- 20 Q. In addition to those two, as part of your
- 21 experience -- your work experience with BEAR, have
- 22 there been cases taken for investigation and
- 23 inspection involving electric scooters?
- 24 A. Yes.
- Q. Have you been involved with cases at BEAR

Page 160 1 involving other types of lithium-ion batteries where 2 you've been called upon to inspect and analyze 3 failures? Α. Yes. What types of products have you looked at 6 and investigated and inspected lithium-ion 7 batteries? I assisted with an electric bike or two Α. 9 or three. I don't recall the count. 10 Many e-cigarette applications. A -- I would call it like a power bank 11 12 type of device. And in all of those cases where you've 13 Ο. 14 been involved in inspecting and analyzing and 15 investigating lithium-ion battery failures, I would 16 assume, and correct me if I'm wrong, but the 17 capacities of those various lithium-ion batteries 18 vary? 19 MR. LAFLAMME: Object to form. 20 Go ahead. 21 Α. Yes. 22 BY MR. AYALA:

But as it relates to how those batteries

24 are put together and generally operate, are they

23

Ο.

25 similar in nature?

- 1 A. They are similar in the overall
- 2 construction.
- 3 Q. So when it comes to your experience in
- 4 inspecting and analyzing lithium-ion batteries that
- 5 are integrated into products, like the one we're
- 6 dealing with in this case, you not only have that
- 7 familiarity, but you have that experience as it
- 8 relates to analyzing and understanding those types
- 9 of failures. Is that fair?
- 10 MR. LAFLAMME: Object to form.
- 11 A. Yes.
- 12 BY MR. AYALA:
- 13 Q. You were asked questions about some of
- 14 the wiring that may be seen on one or two of the
- 15 photos and them retaining their color.
- 16 Do you remember some of those questions?
- 17 A. Yes.
- 18 Q. And you've been asked questions about the
- 19 possibility of this fire originating somewhere other
- 20 than at the hoverboard.
- 21 Do you remember some of that?
- 22 A. Yes.
- 23 Q. As part of your inspection and
- 24 investigation in this case, did you analyze the
- 25 possibility of the fire not having originated in

- 1 this hoverboard battery pack?
- 2 A. I considered that possibility, yes.
- 3 Q. Okay. And you've reviewed the photos,
- 4 you've considered just based on some of your
- 5 background, training, and experience. Is that fair?
- 6 A. Yes.
- 7 Q. Have you reviewed, over the course of
- 8 your -- over the course of your career, have you
- 9 reviewed research and literature that talks about
- 10 lithium-ion battery failures?
- 11 A. Yes.
- MR. LAFLAMME: Object to form.
- 13 BY MR. AYALA:
- 14 O. Have you reviewed literature and seen
- 15 research and conducted your own investigations as to
- 16 electrical arcing and the significance or
- 17 insignificance of that?
- 18 A. Yes, with -- especially with respect to
- 19 lithium batteries.
- 20 Q. You discussed with opposing counsel the
- 21 fact that the colored wires that existed would
- 22 not -- you wouldn't expect to see electrical arcing
- 23 relating to those wires unless the motor was on and
- 24 activated. Is that true?
- 25 A. Right. Because I don't believe those

- 1 wires would be energized.
- 2 Q. And let me ask you, because there was a
- 3 lot of time spent on whether you were familiar with
- 4 the melting temperature of rubber, whether you were
- 5 familiar with the melting temperature of various
- 6 other materials.
- 7 Do you remember some of those questions?
- 8 A. Yes.
- 9 O. You were even asked whether you were
- 10 familiar with the melting temperature of the casing
- 11 for the wiring.
- Do you remember that?
- 13 A. Yes.
- 14 Q. Have you considered in this case, as part
- 15 of your investigation and involvement, if the fire
- 16 originated from an outside source, meaning not the
- 17 hoverboard, the effect and impact the outside source
- 18 of that fire would have on the wiring?
- 19 MR. LAFLAMME: Object to form.
- 20 A. I did have some consideration for that,
- 21 yes.
- 22 BY MR. AYALA:
- 23 Q. Would you expect that if a fire that
- 24 consumed the Wadsworth home would have consumed the
- 25 hoverboard, as we have seen in the various

- 1 photographs included in your file as well as in this
- 2 case in its entirety, would you expect the wiring,
- 3 the wiring casing to be melted?
- 4 A. Overall, that wiring has -- it goes
- 5 through that metal tube. It's like a hollow axle,
- 6 with a wheel.
- 7 I mean, whether the fire was inside --
- 8 started inside of the hoverboard or came from
- 9 outside, it's not surprising that that short section
- 10 would be potentially protected.
- 11 Q. All right. And regardless of whether the
- 12 fire started internally within the hoverboard
- 13 battery pack or externally by some other source, the
- 14 effect and impact on the hoverboard in terms of its
- 15 destruction, would you see it as one and the same?
- 16 A. Well, if it was external, then it -- it
- 17 depends on the -- how the fire progresses through
- 18 the home and reaches the hoverboard. You know, the
- 19 hoverboard is less damaged on the bottom, which is
- 20 at least suggestive that if there was the external
- 21 fire reaching it, it approached from the top of the
- 22 hoverboard, versus starting inside the hoverboard;
- 23 you know, the battery pack is at approximately
- 24 midline. It's not surprising that it would burn
- 25 upwards.

- 1 Q. Okay. In other words, in response to
- 2 some of the questions you were asked about the
- 3 underside of that hoverboard, the wheels, the
- 4 carpeting, it's not surprising to you in your
- 5 investigation that portions of the carpeting were
- 6 still intact?
- 7 MR. LAFLAMME: Object to form.
- 8 A. Yes. It's -- I mean, seeing portions of
- 9 carpet intact, in other -- this fire and in other
- 10 fires, that just happens when there's a -- some kind
- 11 of obstruction between flame and the carpet. So,
- 12 no, it's not a surprising observance.
- 13 BY MR. AYALA:
- 14 O. The amount of either burn, melting, or
- 15 destruction to the underside of the hoverboard
- 16 wheels, would that also depend on the direction of
- 17 which the -- either explosion or expulsion from the
- 18 battery pack occurring?
- 19 MR. LAFLAMME: Object to form.
- 20 A. With regard to the wheels?
- 21 BY MR. AYALA:
- 22 Q. Correct. With regard to the underside of
- 23 the wheels that you were shown.
- 24 A. Oh, yes. The portion that was in contact
- 25 with the carpet?

- 1 Q. Correct.
- 2 A. No. That portion being in contact with
- 3 the carpet, we saw that area was already protected
- 4 somewhat from the fire, so no, it's not surprising
- 5 that the wheels were also mostly -- or the tread was
- 6 intact.
- 7 Q. You were asked whether you were surprised
- 8 that the failure that occurred at .78 inches away
- 9 would not have burned away the wire casing, the
- 10 colored wire casing.
- 11 Do you remember that question?
- 12 A. Yes.
- 13 Q. Whether the hoverboard was the source or
- 14 the hoverboard was attacked by fire, you're still of
- 15 the opinion that this fire originated as a result of
- 16 the failure of the battery cells that you have
- 17 identified?
- 18 A. Right. The color remaining -- you know,
- 19 the wire insulation remaining intact, I only recall
- 20 seeing a short section, so -- and to me, that looks
- 21 like the section that would be inside that metal
- 22 tube, you know, when everything is assembled tightly
- 23 in its original state.
- I feel like there's more to your
- 25 question, but --

- 1 Q. I think you answered it.
- 2 You were asked questions and shown a few
- 3 of the CT images of the internal tabs within the
- 4 battery cells.
- 5 Do you remember that?
- 6 A. Yes.
- 7 Q. And you were asked questions about
- 8 whether or not you would expect them to be -- to
- 9 have some destruction if, in fact, there was a short
- 10 circuit internally.
- 11 Do you remember that?
- 12 A. Yes. Yeah, I remember.
- 13 Q. Is there -- is it possible for the tabs
- 14 within the battery cells to remain intact even in
- 15 the occurrence of a short circuit?
- 16 A. Yes. And I think this is a good example
- 17 of that.
- You know, to me it's clear that the
- 19 batteries, these two batteries -- cells exploded,
- 20 because the top caps are gone, the contents are
- 21 ejected and gone. The crimp that holds the top cap
- 22 is opened. So I don't think there's any reason to
- 23 doubt that the battery exploded open with internal
- 24 pressure.
- 25 The fact that the negative tabs appear to

- 1 be largely intact is -- it's unusual, but it's
- 2 not -- you know, their destruction is not a
- 3 requirement for a cell to explode.
- 4 Q. And if the -- there's a few facts that at
- 5 least you've been able to establish from your
- 6 involvement in the case, one of them being that
- 7 cells 4 and 10 exploded.
- 8 A. Yes.
- 9 O. Whether it's because of an internal short
- 10 circuit or an external source, they exploded.
- 11 MR. LAFLAMME: Object to form.
- 12 A. Right. It could have included due to
- 13 external heating. That's possible.
- 14 BY MR. AYALA:
- 15 Q. And the fact that the tabs seen on these
- 16 CT scans 76 and 77, the exhibits to your deposition,
- 17 whether the source was an internal short or external
- 18 fire, the fact is that they ruptured. So if you
- 19 expect to see them in some fashion destroyed, well,
- 20 then you should expect to see them destroyed whether
- 21 internal combustion, if you will, or an external
- 22 source.
- 23 A. Right.
- Q. And so what 76 and 77 demonstrate is that
- 25 even when battery cells rupture, explode, it doesn't

- 1 necessarily follow that the internal tabs will be
- 2 destroyed. Is that fair?
- 3 A. That's fair. That's my interpretation of
- 4 this evidence.
- 5 Q. Is that consistent, at the very least,
- 6 with what you've learned and possibly even seen over
- 7 the course of your career with the various
- 8 lithium-ion research and inspections and
- 9 investigations that you've done?
- 10 A. Yes. We -- we've seen negative tabs in a
- 11 variety of conditions. Yeah, I don't recall the
- 12 whole range of conditions offhand.
- 13 Q. Okay. But at the very least, there was
- 14 some in conditions similar to what you've seen in
- 15 this case? Is that fair?
- 16 A. Yes.
- 17 O. You were not involved in the removal of
- 18 the hoverboard from its original location at the
- 19 home, correct?
- 20 A. Correct.
- 21 O. Whoever was involved in the removal of
- 22 that -- of the hoverboard from its original location
- 23 and its original condition, you've not spoken with
- 24 them?
- 25 A. Correct.

Page 170 You don't know what components were 1 Q. 2 moved, changed, or otherwise, if any? MR. LAFLAMME: Object to form. 3 4 BY MR. AYALA: Q. Is that fair? 5 That's fair. Α. So when you're shown pictures, like CT 8 images that seem to suggest that the hoverboard was 9 not plugged in at the time of this incident, you are 10 unfamiliar with the specifics of how it is that the 11 hoverboard got from its original location to 12 ultimately being imaged, which was shown on -- let 13 me find the exhibit. 14 On Exhibit 80. Is that fair? 15 MR. LAFLAMME: Object to form. Α. So specifically, I am not familiar with 17 the condition of the hoverboard prior to it arriving 18 at our office the first time, other than a few 19 photos from -- which were provided by you -- of 20 other people's investigation. 21 BY MR. AYALA: And you were asked early on whether you 22 Q. 23 had any evidence that you were relying upon relating 24 to the hoverboard being plugged in at the time of

25 incident.

Page 171 1 Do you remember that? Yes, I think so. Α. And you were asked that question in Ο. 4 conjunction with whether -- you know, what 5 depositions and deposition testimony you had 6 reviewed or had not reviewed. 7 Do you remember that? Α. Yes. You did review the Sweetwater County 10 Sheriff's Office Public Investigative Report, 11 however, correct? Yes, I did. 12 Α. And in that report, on what appears to be 13 Ο. 14 page 8 of 15 of that report, it talks about 15 Detective Sheaman's involvement in his 16 investigation. And a little bit south of halfway through 17 18 the page, the paragraph begins with, "While 19 observing." 20 Α. Yes.

- 21 Q. Okay. It says: While observing
- 22 electrical wiring and components in the bedroom and
- 23 closet, Detective Sheaman found nothing suspicious.
- 24 However, Detective Sheaman did notice an outlet that
- 25 showed that something had been inserted into the

- 1 lower plug. There was melted plastic covering the
- 2 lower plug holes and were -- and wires were coming
- 3 out of the melted plastic. This showed that
- 4 something may have been plugged into the outlet,
- 5 maybe a charger.
- 6 Do you see that?
- 7 A. Yes.
- 8 Q. Is that, at the very least, one piece of
- 9 evidence that you relied upon in the totality of all
- 10 the other evidence, but at least one piece that you
- 11 relied upon for your assumption that this hoverboard
- 12 was plugged in at the time of incident?
- 13 A. Yes, this was a part of it.
- 14 O. You mentioned you had not reviewed the
- 15 children's deposition testimonies yet, correct?
- 16 A. Correct.
- 17 Q. Is that something you anticipate looking
- 18 at?
- 19 A. I think I will.
- 20 Q. Okay. If there's anything that -- after
- 21 your review of those depositions, that changes your
- 22 opinions at all, will you let me know?
- 23 A. Of course.
- Q. Same thing as to Detective Sheaman's. If
- 25 there's anything that you review that affects,

- 1 impacts, and changes your opinions, will you let me
- 2 know that?
- 3 A. Yes.
- 4 O. You were asked questions about the
- 5 circuit board and whether or not you would expect it
- 6 to have some fire damage or destruction if this fire
- 7 began with the battery cell.
- 8 Do you remember some of those questions?
- 9 A. Yes.
- 10 Q. Similar to the questions I asked you
- 11 about the tires and the carpet and the wiring, if
- 12 this hoverboard had been attacked by an outside
- 13 source, by a fire from the outside, would you expect
- 14 the same or similar damage to the circuit board as
- 15 what's evident now?
- MR. LAFLAMME: Object to form.
- 17 A. With respect to an external fire reaching
- 18 the hoverboard, the condition of the circuit board
- 19 would depend on the amount of protection that it had
- 20 from the fire.
- 21 So in that case, I mean, being under --
- 22 under a battery pack within the board, it -- it
- 23 seems like it would -- it's reasonable that it could
- 24 also remain intact due to an external fire.
- 25 \* \* \*

1 BY MR. AYALA:

- Q. The portion of your report, Section 6,
- 3 that deals with -- and is titled Design, FMEA and
- 4 Risk Assessment, the information that you've placed
- 5 on page 10, 11, 12, and the first paragraph of 13,
- 6 is that all information that really outlines the
- 7 background and almost definitions of what the FMEA
- 8 and Risk Assessment portion or analysis is all
- 9 about?
- 10 A. Yes. It's -- it's meant to be background
- 11 and explanatory about FMEA, in general.
- 12 Q. Okay. You were asked early on in your
- 13 deposition about opinions that have been either
- 14 limited or stricken in other cases.
- Do you remember some of that discussion?
- 16 A. Yes.
- 17 Q. And in particular, a case called
- 18 Bettencourt was discussed with you.
- 19 Do you remember that?
- 20 A. Yes, I believe so.
- 21 Q. And it was represented to you that in
- 22 that Bettencourt case, that your opinions -- at
- 23 least that a majority of your opinions were
- 24 stricken.
- 25 Do you remember that?

Page 175 Yes. I think I was told three out of 1 Α. 2 five. Right. Ο. And those -- those opinions that -- or at 5 least a portion of those opinions that were stricken 6 in the Bettencourt case -- do you recall that? Α. Yes, I recall it now. Ο. What is your recollection or 9 understanding as to what led to the striking of that 10 portion of your opinion? Α. The one that -- opinion that I recall 11 12 specifically is the FMEA opinion. And the 13 circumstances leading to that being stricken were 14 not -- it wasn't clear to me. 15 I reviewed documents produced by the 16 defendant. Those documents did not include an FMEA. 17 Therefore, I concluded that they did not perform an 18 FMEA. 19 Ο. Okay. In other words, is it your 20 understanding that documents were requested relating 21 to FMEA, documents and records received relating to 22 that same request and provided to you for review, 23 and from what you received and reviewed, there was 24 no documentation to suggest or evidence FMEA being

25 performed?

Page 176 1 MR. LAFLAMME: Object to form. Α. Correct. 3 BY MR. AYALA: And your conclusion based upon what you 5 were provided, or really not provided, was that 6 proper FMEA had not been not been conducted? 7 MR. LAFLAMME: Object to form. Α. That's correct. 9 BY MR. AYALA: 10 And based upon that conclusion, the Court Ο. 11 did not allow your opinion? MR. LAFLAMME: Object to form. 12 It's not clear to me on what basis the 13 Α. 14 Court did not allow that opinion. 15 BY MR. AYALA: 16 0. The opinions that you're offering in this 17 case, would it be fair to say they're based upon 18 certainly your inspection of this hoverboard? 19 Α. Yes. 20 Q. And its components? 21 Α. Yes. As well as the pictures provided to you 22 Q. 23 relating to this case?

24 A. Yes.

Q. As well as your background, your

- 1 training, your experience?
- 2 A. Yes.
- 3 Q. As well as any additional information
- 4 such as investigative reports and certainly the
- 5 depositions that you have in your possession?
- 6 A. Yes, generally. To the degree that I've
- 7 read those.
- 8 Q. And any research or literature that
- 9 you've reviewed over the years relating specifically
- 10 to these issues we're talking about today with
- 11 lithium-ion batteries?
- 12 A. Yes.
- 13 Q. Based upon your inspection and the
- 14 totality of your investigation in this case, can you
- 15 conclude, more likely than not, within a reasonable
- 16 degree of engineering probability, that the fire
- 17 that we're here to talk about today originated as a
- 18 result of a malfunction or a defect in this battery
- 19 cell within the battery pack of the Wadsworth
- 20 hoverboard?
- 21 MR. LAFLAMME: Object to form.
- 22 A. Yes. So overall, I think that's the most
- 23 likely based on -- you know, considering if a fire
- 24 did reach the board and consumed the board, I would
- 25 expect the other cells in the pack to have also

- 1 exploded, if explosions were the result of external
- 2 heating.
- 3 BY MR. AYALA:
- 4 Q. Let me see if I understood what you just
- 5 said.
- 6 If the explosion of this hoverboard was
- 7 due to an external heating origin, you would have
- 8 expected the remainder of those battery cells to
- 9 have further exploded?
- 10 A. Yes.
- 11 O. The fact that cells 4 and 10 were the
- 12 only ones that exploded, does that lead you to
- 13 believe that it was directly related to an internal
- 14 short in those cells?
- MR. LAFLAMME: Object to form.
- 16 A. More likely than not, yes.
- 17 BY MR. AYALA:
- 18 O. Okay. The direction in which those cells
- 19 ruptured or exploded, does that any in way, shape,
- 20 or form, affect the possibility of the other battery
- 21 cells exploding?
- MR. LAFLAMME: Object to form.
- A. No. No, I don't believe it does.
- 24 BY MR. AYALA:
- Q. Okay. In the case of an internal short,

- 1 is it possible for isolated battery cells to explode
- 2 and not the entirety of the pack?
- 3 A. That's -- that is the expected behavior,
- 4 is that an isolated battery would -- that
- 5 experiences an internal short would -- only itself
- 6 would explode. It's not impossible that it could
- 7 cause a chain reaction, but I don't think that's --
- 8 that's not typical that I've seen.
- 9 Q. Okay. And then is it -- is it more
- 10 likely that when the short occurs, as in this case,
- 11 in two cells that are isolated, that that, then,
- 12 could lead to the fire -- the flames as you, I
- 13 believe, described it earlier, an explosion?
- MR. LAFLAMME: Object to form.
- 15 A. Right. So yes, internal shorting can
- 16 lead to flames and explosions.
- 17 BY MR. AYALA:
- 18 Q. Without the other cells exploding?
- 19 A. Right, without -- without sufficient heat
- 20 going into the adjacent cells and triggering
- 21 explosions there, right.
- Q. Okay. You were asked early in your
- 23 deposition, as we looked at Exhibit 73, about the
- 24 possibility of the fire starting outside of the
- 25 boys' bedroom window.

- 1 Do you remember some of those questions?
- 2 A. Yes.
- 3 Q. And you were asked specifically about the
- 4 fiberglass that is beyond the wall and in between
- 5 some of those studs.
- 6 Do you remember that?
- 7 A. Yes.
- 8 Q. And the suggestion made to you from
- 9 questioning was that that insulation would have, in
- 10 some fashion, protected the studs from burning down.
- 11 Do you remember that?
- 12 A. Yes.
- 13 Q. You were also asked questions and
- 14 discussed the boys' bed that was just to the other
- 15 side of that window.
- Do you remember that?
- 17 A. Yes.
- 18 Q. And the suggestion made to you was that
- 19 that was, in essence, fuel for the fire.
- 20 Do you remember that?
- 21 A. Yes.
- 22 Q. If that bed caught on fire due to fire
- 23 coming in through that open window, would you expect
- 24 that the bed, which was up against that wall, would
- 25 have burnt or destroyed those studs more than what's

Page 181 1 evidenced on page 73? MR. LAFLAMME: Object to form. 2 Exceeds this witness' expertise. Α. That's certainly a reasonable conclusion, 5 yes. 6 BY MR. AYALA: I mean, you were asked questions about 8 whether the bed acts as fuel, the effect and impact 9 of insulation on the studs burning or burning more 10 or burning less. And so now I'm asking you whether or not 11 12 you believe that this bed catching on fire because 13 of the fire entering through the window, whether or 14 not that would have led to further burning, 15 charring, or destruction of those studs. 16 Is that something that you've seen in 17 your experience and investigations? MR. LAFLAMME: Object to form. 18 19 Sorry, that was a long question. Α. 20 BY MR. AYALA: 21 That's fine. Ο. Could you --22 Α. No, it's fine. Don't worry about it. 23 Q. -- redo? 24 Α. 25 Is it possible for lithium-ion batteries Q.

- 1 like the one in this hoverboard to either short
- 2 circuit or fail while not being plugged into an
- 3 electrical source?
- 4 A. So I think it may depend on the failure
- 5 mode of the separator.
- 6 Q. Okay.
- 7 A. Yeah. It -- I can't answer that with
- 8 certainty at this time.
- 9 Q. Well, let me ask you this: Have you
- 10 either seen through your own investigations and
- 11 inspections or learned through research or
- 12 literature that it is possible for lithium-ion
- 13 batteries to fail almost spontaneously without being
- 14 plugged into an electrical source?
- MR. LAFLAMME: Object to form.
- 16 A. So, you know, in many of the e-cigarette
- 17 cases, the battery explosions happen in people's
- 18 pockets, so they're not necessarily connected to --
- 19 they're not like in the charger being charged or in
- 20 the device discharging.
- 21 BY MR. AYALA:
- 22 Q. Okay.
- A. Yeah.
- Q. You were asked whether or not you
- 25 reviewed any bodycam footage from first responders

- 1 in this case.
- You didn't review any of that, right?
- 3 A. Correct.
- 4 Q. Did you -- as far as your involvement and
- 5 the scope of your involvement goes, is that a piece
- 6 of evidence that you feel you need to review for any
- 7 reason?
- 8 MR. LAFLAMME: Object to form.
- 9 A. Well, my understanding of my scope was
- 10 looking at the hoverboard evidence, you know,
- 11 personally, directly, to determine if -- if it was
- 12 consistent with a -- being an origin of fire.
- 13 BY MR. AYALA:
- 14 Q. And based upon your understanding of your
- 15 scope, do you believe that it -- it is -- all the
- 16 evidence you reviewed is consistent with the battery
- 17 cells of this hoverboard being, at the very least,
- 18 the cause of this fire?
- MR. LAFLAMME: Object to form.
- 20 A. More likely.
- 21 BY MR. AYALA:
- Q. More likely than not?
- 23 A. Than not, yes.
- Q. Okay. As far as the questions asked of
- 25 you regarding V patterns and inverted cone patterns

- 1 and all of that stuff, you're relying on other
- 2 experts in the case to talk about those components
- 3 of fire damage; is that fair?
- 4 A. Yes.
- 5 Q. Regarding any of the hypotheticals of the
- 6 fire originating outside or in some other location,
- 7 the only thing you're here to talk about is the fire
- 8 originating in this battery cell based upon your
- 9 observations, inspection, and investigation. Is
- 10 that true?
- 11 MR. LAFLAMME: Object to form.
- 12 A. Yes, that's my understanding of why I'm
- 13 here.
- 14 BY MR. AYALA:
- 15 Q. And despite UL listings and
- 16 certifications, you believe that this battery pack,
- 17 and specifically the battery cells 4 and 10 within
- 18 the pack, were defective?
- 19 A. Yes. So that -- that gets into a deeper
- 20 root cause which we did not get into, but, you know,
- 21 we would need to look at also if the battery cells
- 22 and battery management system design were, let's
- 23 say, appropriate, for the usage, for the loads being
- 24 drawn and the power -- sorry, the charge and
- 25 discharge cycles experienced.

Page 185 1 So it -- it may not be that the cell was 2 specifically defective, but maybe as part of the 3 overall design, it may not have been the appropriate 4 cell to use. Q. All in all, can we at least agree that in 6 a consumer product like this hoverboard, that the 7 battery pack integrated into it should not explode? 8 Α. Yes. And it's your belief, based upon your 10 background, training, experience, and review in this 11 case, that the battery pack in this case did 12 explode, which led to the fire at the Wadsworth home 13 more likely than not? 14 More likely than not. 15 MR. AYALA: Okay. Thank you, sir. 16 Those are all of my questions. 17 MR. LAFLAMME: So I have some 18 follow-ups, as you might expect. 19 20 EXAMINATION 21 22 BY MR. LAFLAMME: Tell me every single lithium-ion battery 23 Q. 24 fire case that you have worked on. 25 So with regard -- so the lithium-ion Α.

- 1 battery cases that I've worked on, I believe the
- 2 vast majority of them involved at least a fire of
- 3 the cell but not necessarily a structure fire.
- 4 Q. You mentioned e-cigarettes.
- 5 A. Yes.
- 6 Q. How many of those cases have you worked
- 7 on, that involved an ignition through the
- 8 lithium-ion battery?
- 9 A. I would estimate dozens. Many.
- 10 Q. All right. Any in which you've been the
- 11 lead investigator?
- 12 A. No.
- Q. So in each of those, you've been an
- 14 assistant investigator?
- 15 A. Yes.
- 16 Q. And you would not have authored a report
- 17 for any of those e-cigarette cases that you've just
- 18 referenced, correct?
- 19 A. Correct.
- 20 Q. And you wouldn't have provided any
- 21 testimony with respect to any e-cigarette cases,
- 22 correct?
- 23 A. Correct.
- Q. How many lithium-ion batteries are in an
- 25 e-cig?

Page 187 Α. Ranges from one to -- one or two is the 1 2 most common. What's the UL standard applicable to 3 Q. 4 e-cigarettes? 5 Α. I don't recall the number. It's not UL 2272, is it? Q. Α. No. Q. So aside from the e-cigarette cases in 9 which you have assisted others, we're aware of the 10 one other hoverboard in which -- case in which you 11 assisted one of your co-workers, correct? 12 Yes. Α. 13 Q. And then this case, correct? 14 Α. Correct. 15 Q. Does that run the full list? 16 MR. AYALA: Form. 17 BY MR. LAFLAMME: O. Does that run the full list of 18 19 lithium-ion battery fire cases that you have worked 20 on? 21 There were some e-bike, electric bike. Α. Were there e-bike fires? 22 Q. Α. 23 Yes. 24 Okay. How many of those have you worked Ο.

25 on?

- 1 A. One, I remember distinctly, but I believe
- 2 there may have been one or two more.
- 3 Q. You were not the primary expert on
- 4 either -- any of those, were you?
- 5 A. Correct.
- 6 Q. You have never authored a report related
- 7 to an e-bike fire case, have you?
- 8 A. Correct.
- 9 Q. You have not provided any testimony
- 10 related to an e-bike fire case, correct?
- 11 A. Correct.
- 12 Q. You were merely an assistant to someone
- 13 else on those e-bike fire cases, correct?
- MR. AYALA: Form.
- 15 A. Correct.
- 16 BY MR. LAFLAMME:
- 17 Q. And, in fact, you weren't even a
- 18 professional engineer until last year, correct?
- 19 A. Correct.
- 20 Q. Have we now exhausted the list of all of
- 21 the lithium-ion battery fire cases that you've
- 22 worked on?
- 23 A. I believe so.
- Q. So the only one in which you have
- 25 actually authored a report related to an alleged

- 1 lithium-ion battery case is this one?
- 2 A. Yes.
- 3 Q. And the only one in which you've ever sat
- 4 for a deposition related to a lithium-ion -- an
- 5 alleged lithium-ion battery fire is this case,
- 6 correct?
- 7 A. Yes.
- 8 Q. And the only case in which you've been
- 9 named as an expert, disclosed as an expert for a
- 10 lithium-ion battery case, involving an alleged fire
- 11 is this one?
- 12 A. Yes.
- 13 Q. You indicated that you considered the
- 14 possibility of the fire not starting at the
- 15 hoverboard as part of your investigation in this to
- 16 Attorney Ayala.
- 17 Do you recall that?
- 18 A. Yes.
- 19 Q. But then later, you said the scope of
- 20 your work was to only look at the hoverboard
- 21 evidence, correct?
- 22 A. Was to look at the hoverboard evidence to
- 23 see if it is consistent or not with internal -- with
- 24 being a fire origin.
- Q. You have not done anything to assess

- 1 whether the fire could have started at the smoking
- 2 shed, correct?
- 3 A. Correct.
- 4 Q. And the only physical evidence that you
- 5 have looked at is the hoverboard, correct?
- 6 A. Yes.
- 7 Q. And you'll agree that lithium-ion battery
- 8 cells can fail when they are subject to an external
- 9 fire attack?
- 10 A. Yes.
- 11 Q. And you don't -- you haven't done any
- 12 assessment to determine how this fire may have moved
- 13 through the Wadsworth structure, correct?
- 14 A. Correct.
- 15 Q. One of the things that you said is that
- 16 an internal short within a lithium-ion battery
- 17 should only affect that singular cell.
- 18 Do you recall that?
- 19 A. Yes.
- 20 Q. And in this case, you're saying that two
- 21 singular cells had a short circuit, correct?
- 22 A. Yes.
- 23 Q. So at substantially the same time, two
- 24 different cells in two different parts of this
- 25 battery pack had a failure of the separators within

Page 191 1 those individual cells, correct? Α. Yes. Q. And they had a failure of the separator 4 at substantially the same time to the extent that 5 they both short-circuited at substantially the same 6 time. That's your theory, correct? Α. That's what it -- that's what it appears 9 to be. 10 Q. Have you ever had another case where two 11 individual cells short-circuited at the same time? 12 Α. No. That would be pretty unusual, wouldn't 13 Ο. 14 it? 15 MR. AYALA: Form. A. It's unusual, so far. 17 BY MR. LAFLAMME: Q. Meaning you have to have an individual 18 19 failure within cell 4, at substantially the same 20 time as you have an individual but completely 21 separate failure at cell 10, correct? 22 Α. Yes. That's what you're saying in this case. 23 Q. 24 MR. AYALA: Form.

He's said what he's saying.

25

- 1 A. Yes. Yes. I believe it's a coincidence,
- 2 but that's what appears to have occurred.
- 3 BY MR. LAFLAMME:
- 4 Q. Have you done any research to determine
- 5 the percentage chance of that coincidence?
- 6 A. No.
- 7 MR. AYALA: Form.
- 8 BY MR. LAFLAMME:
- 9 O. The individual cell itself, the
- 10 conditions that we see cells 4 and 10 in after the
- 11 fire, those conditions would have the same
- 12 appearance if it was an external fire attack as
- 13 well, correct?
- 14 A. Yes. For those individual cells, yes.
- 15 Q. Meaning when lithium-ion battery cells
- 16 fail in a fire due to a fire attack, the appearance
- 17 is similar to what we see the two cells that have
- 18 failed in this case.
- 19 A. Yes.
- 20 Q. You were asked if it's possible to have a
- 21 short -- an internal short with the cell -- or,
- 22 sorry, with the hoverboard not plugged in.
- 23 Do you recall that?
- 24 A. Yes.
- Q. You'd agree with me that it's very

Page 193 1 difficult to have an internal short circuit if the 2 hoverboard is not plugged in, correct? MR. AYALA: Form. 3 Α. Yes. It's a low likelihood --5 BY MR. LAFLAMME: 6 Ο. It's a very low ---- versus --Α. Q. Sorry, go ahead. Than versus if it was plugged in and Α. 10 charging. And the reason being because there's no 11 Ο. 12 continuous energy provided to those cells if the 13 hoverboard is not plugged in, correct? 14 MR. AYALA: Form. 15 Α. That's -- I mean, that's a way to put it, 16 yes. 17 BY MR. LAFLAMME: One of the things that you had indicated 18 Ο. 19 to Attorney Ayala was that if you were to look at a 20 further root analysis, there may be an issue with 21 the cell not being the appropriate cell to use? 22 Yes. Α. Do you have any indication that the 23 24 lithium-ion battery cells utilized in this battery 25 pack were not appropriate for its application?

- 1 A. I have not collected the data to make
- 2 that determination yet.
- 3 O. You understand that the hoverboard as a
- 4 whole, in order to be UL 2272, needs to specify the
- 5 battery pack and cells that are going to be used,
- 6 correct?
- 7 A. Yes.
- 8 Q. And you understand that this hoverboard
- 9 was UL 2272 certified, correct?
- 10 A. Yes.
- 11 Q. So you don't have any evidence that the
- 12 cells that were utilized for this hoverboard were
- 13 not the correct cells, correct?
- 14 A. Right. I haven't done that investigation
- 15 level yet.
- 16 Q. You talked with Mr. Ayala about the
- 17 wiring that was adjacent to the battery pack, and
- 18 how it was associated with the wheel, correct?
- 19 A. Yes.
- 20 Q. And that you wouldn't expect that wiring
- 21 to be energized unless the hoverboard is being used.
- 22 A. Right.
- 23 Q. There would have been wires energized
- 24 within the hoverboard if the hoverboard had been
- 25 plugged in even not in use, correct?

- 1 MR. AYALA: Form.
- 2 A. Yes, I believe there would be.
- 3 BY MR. LAFLAMME:
- 4 Q. Meaning if the hoverboard is plugged in,
- 5 while some of the wires may not be energized, there
- 6 would certainly be some internal wires that are
- 7 energized when it's plugged in?
- 8 A. Yes, the -- let's see. There would be,
- 9 at least from the charger port into probably the
- 10 DMS. And that's probably at a fairly low
- 11 energization, if the battery -- if it's fully
- 12 charged.
- 13 Q. That section of wiring, though, would
- 14 have power to it, correct, meaning it would be
- 15 energized?
- 16 A. Yes.
- 17 Q. And it would be energized to the extent
- 18 that had it been attacked by fire while plugged in,
- 19 you could see an arc in that area?
- MR. AYALA: Form.
- 21 A. That -- that, I don't -- I don't know if
- 22 that's true offhand.
- 23 BY MR. LAFLAMME:
- Q. Okay. Regardless, I think we agree,
- 25 there wasn't any arcing that was found on any of the

- 1 internal wiring in the hoverboard, correct?
- 2 A. That's true.
- 3 Q. And there wasn't any arcing found on the
- 4 house wiring immediately adjacent to where the
- 5 hoverboard was located, correct?
- 6 A. Not that I read about.
- 7 Q. As an expert doing an investigation, you
- 8 agree that it's important to have as much
- 9 information as you can about the fire loss, correct?
- 10 A. Yes.
- MR. AYALA: Form.
- 12 A. In general, yes.
- 13 BY MR. LAFLAMME:
- 14 Q. I mean, as an engineer, you want all the
- 15 information that's available, right?
- 16 A. Yes.
- 17 Q. And you want to have the opportunity to
- 18 review all the information that's available during
- 19 your investigation.
- 20 A. Yes.
- 21 Q. You don't want parts of the
- 22 investigation -- or parts of whatever information is
- 23 available to be hidden from you, correct?
- MR. AYALA: Form.
- 25 A. True.

1 BY MR. LAFLAMME:

- 2 Q. And you agree with me that there were a
- 3 number of documents that you've seen here today that
- 4 you had not seen prior to today, correct?
- 5 A. True. Yes.
- 6 Q. And you indicated that you have not seen
- 7 any photographs from the lab inspection at Palmer's
- 8 lab, correct?
- 9 A. Correct.
- 10 Q. Are you aware at all of what
- 11 Mrs. Wadsworth's activities were the evening before
- 12 and in the early morning hours before the fire?
- 13 A. No.
- 14 O. Do you know that she had smoked in that
- 15 smoking shed a couple of hours before this fire was
- 16 reported?
- 17 A. No.
- 18 MR. AYALA: Form.
- 19 BY MR. LAFLAMME:
- 20 Q. Are you first learning that right now?
- 21 A. Yes.
- Q. Did you know that she had upwards of ten
- 23 alcoholic drinks that evening?
- MR. AYALA: Form.
- 25 A. No.

Page 198 1 BY MR. LAFLAMME: Q. You are first learning about that now? Α. Yes. Ο. Were there any outside studies or 5 standards that you relied on that were not 6 referenced in your report? Α. I mean, there's literature that I have 8 read that's part of my general kind of background 9 knowledge at this point, but --10 Ο. So what is that --Α. -- the --11 Sorry. Go ahead. 12 Q. Just that wasn't specific to this case. 13 Α. 14 Okay. O. 15 Α. Yeah. 16 0. As far as the literature that you have 17 read over your career as general background 18 knowledge, any of it that you would reference or 19 cite as specific to this case? 20 Α. Not -- I think it's applicable. It's 21 applicable information, but I'm not really more 22 specific than that. Applicable in what way? 23 Q. 24 Well, there are some 20 -- I want to say Α.

25 around 20 -- I want to say 2015 articles on thermal

- 1 runaway within battery packs. So those were, you
- 2 know, it was done in the lab, and people wrote
- 3 papers about it.
- 4 Q. When you say 2015, you're talking about
- 5 the year?
- 6 A. Yes. Yeah.
- 7 Q. And that's kind of when lithium-ion
- 8 battery products were being introduced to the
- 9 market, correct?
- 10 A. Yes.
- 11 O. So back in 2015 when a lot of these
- 12 products were first being introduced to the market,
- 13 there were some articles about how there were some
- 14 issues with the products from a potential fire
- 15 perspective?
- 16 A. Yes.
- 17 Q. Okay. Are those the articles that you're
- 18 talking about?
- 19 A. Yes.
- 20 Q. And as a result of those issues back in
- 21 2014-15 and those articles, you understand that UL
- 22 then got involved and created some standards for
- 23 products that utilize lithium-ion batteries,
- 24 correct?
- 25 A. That sounds reasonable. I'm not really

- 1 familiar with UL's initiating motivation.
- Q. Well, one of those standards was UL 2272,
- 3 applicable to -- or at least that hoverboards fall
- 4 under.
- 5 MR. AYALA: Form.
- 6 BY MR. LAFLAMME:
- 7 O. Correct?
- 8 A. Yes.
- 9 Q. Do you know when that standard was first
- 10 issued?
- 11 A. No.
- 12 Q. You don't know if it was put together in
- 13 2016 and became effective early 2017? You don't
- 14 know the initial date for UL 2272?
- 15 A. I don't.
- 16 Q. Would it surprise you to know that
- 17 Detective Sheaman was not aware of a smoking shed
- 18 outside the boys' bedroom?
- MR. AYALA: Form.
- 20 A. I suppose that would be surprising.
- 21 BY MR. LAFLAMME:
- 22 Q. You would expect an origin and cause
- 23 investigator to fully process the scene before they
- 24 issue any opinions, correct?
- MR. AYALA: Form.

Page 201 Yeah. I think that sounds reasonable. 1 Α. 2 BY MR. LAFLAMME: And you would expect an origin and cause 3 O. 4 investigator to review body camera footage that was 5 taken by his own department where some of the 6 individuals involved in the fire made statements 7 about where they first saw the fire, correct? 8 MR. AYALA: Form. Yeah. Certainly at some point. Α. 10 BY MR. LAFLAMME: It would be important to your analysis to Ο. 12 know if the statements from the Wadsworth children 13 immediately after the fire on that morning on body 14 camera footage stated that the fire started outside? 15 MR. AYALA: Form. 16 Α. That would be -- that would be a good bit 17 of information to know. MR. LAFLAMME: I think that's all the 18 19 questions I have for now, sir. Thank you. 20 21 EXAMINATION 22 23 BY MR. AYALA:

So assume with me that the kids made Ο.

25 statements as they're sitting outside of their home

- 1 burning, on fire, next to their mother, whose body
- 2 is almost completely burnt at the time, assume with
- 3 me that their statements were that they believe the
- 4 fire started outside.
- 5 Do you then, as an expert in your field,
- 6 with your scope of practice, ignore the findings of
- 7 your inspection?
- 8 A. Certainly not my inspection of the board.
- 9 We'd proceed in the same way, regardless of witness
- 10 statements.
- 11 Q. You don't ignore the results of your
- 12 inspection and the experience and your background
- 13 and your training when coming to the conclusions
- 14 that you do?
- 15 A. Correct.
- 16 Q. You were asked whether or not you knew
- 17 that Stephanie Wadsworth smoked the night of the
- 18 fire in that shed, whether you knew that she drank
- 19 alcohol the night of the fire, again, even assuming
- 20 all of that to be true in the way it was
- 21 characterized to you, do you then ignore the results
- 22 of your own hands-on inspection and no longer rely
- 23 upon those facts that you yourself have analyzed?
- MR. LAFLAMME: Object to form.
- 25 A. Right. I still am reliant upon my own

- 1 review of evidence, especially what I have seen
- 2 firsthand.
- 3 BY MR. AYALA:
- 4 Q. What opposing counsel didn't tell you is
- 5 that she also testified that the space heater in
- 6 that shed was off.
- 7 Did you know that?
- 8 A. No, I didn't -- I wasn't aware of the
- 9 state of the heater.
- 10 Q. And that any cigarette that she smoked
- 11 was off. Did you know that?
- 12 A. I wasn't aware either way if she was
- 13 smoking.
- 14 Q. Despite seeing some additional documents
- 15 that you were shown today and have been attached to
- 16 your deposition, did any of those documents in any
- 17 way, shape, or form, change your analysis or your
- 18 conclusions in this case?
- 19 A. So far, no. I mean, we talked earlier,
- 20 that achieving UL approval for a given standard
- 21 isn't a guarantee of -- isn't a guarantee of safety.
- 22 It's certainly good to do, but it's not a guarantee.
- 23 And despite the certification, I still have the --
- 24 you know, my review of the evidence.
- Q. And we know it's not a guarantee, because

- 1 as opposing counsel established, Jetson itself
- 2 recalled their Rogue models that were UL 2272 and
- 3 2580 certified, right?
- 4 A. Yes.
- 5 Q. And by the way, you were asked about the
- 6 external fire attack and this -- as they like to
- 7 paint it, this phenomena that two cells, almost
- 8 simultaneously, short-circuited and how rare that
- 9 might be.
- 10 If this hoverboard was attacked by fire,
- 11 wouldn't it be equally as rare that only cells 4 and
- 12 10 exploded?
- MR. LAFLAMME: Object to form.
- 14 A. Right. If these cells are susceptible to
- 15 explosion due to external heating, then I would
- 16 expect more -- most of the cells that were also
- 17 exposed to fire to also explode.
- 18 BY MR. AYALA:
- 19 Q. And so what makes the most sense is that
- 20 within those individual cells, 4 and 10, that they
- 21 had specific issues, individually, which caused them
- 22 to malfunction; i.e., explode?
- 23 MR. LAFLAMME: Object to form.
- 24 A. So that's -- that's the conclusion I
- 25 reached for saying it's more likely that the cells

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Page 205
 1 were an origin for fire.
              That's all. I've lost my train of
 2
 3 thought.
                  MR. AYALA: Okay. That's it. Thank
 5
        you.
 6
 7
                        EXAMINATION
 8
 9 BY MR. LAFLAMME:
10
              With respect to the Jetson Rogue and the
11 recall that it underwent, you said you don't know
12 the circumstances of the Kaufman fire, correct?
13
        Α.
              Correct.
14
             And you don't know whether there was an
15 aftermarket charger that was used for the Kaufman
16 use of that -- or charging of the hoverboard,
17 correct?
18
        Α.
          Correct.
19
           And as far as you are aware, there's no
        0.
20 potential issue with an improper charger or
21 aftermarket charger being used by the Wadsworth
22 family in this case?
23
                  MR. AYALA: Form.
24
       A.
              I'm not aware.
25
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Page 206 1 BY MR. AYALA: You haven't seen any evidence that the Q. 3 Wadsworth family purchased an aftermarket charger 4 for this hoverboard, correct? Correct. 5 Α. 6 MR. LAFLAMME: Okay. That's all I 7 have. Thank you. MR. AYALA: We'll read. And I'm sure 8 it will be ordered. I'll take an e-tran copy. 9 10 Thank you. THE STENOGRAPHER: When do you need 11 12 it? MR. LAFLAMME: This week. By Friday 13 is fine. I'll give you a full week. 14 15 THE STENOGRAPHER: Do you need yours 16 by Friday as well, Mr. Ayala? 17 MR. AYALA: Sure. Why not. (Time noted: 3:46 p.m. PDT) 18 19 --000--20 21 22 23 24 25

Page 207 CERTIFICATE 1 2 I, DEBRA A. DIBBLE, RDR, CRR, CRC, Notary 3 4 Public, do hereby certify: That DEREK A. KING, M.S., P.E., the witness 6 whose deposition is hereinbefore set forth, was duly 7 sworn by me and that such deposition is a true 8 record of the testimony given by such witness; That pursuant to FRCP Rule 30, signature of 10 the witness was requested by the witness or other 11 party before the conclusion of the deposition; 12 I further certify that I am not related to any 13 of the parties to this action by blood or marriage, 14 and that I am in no way interested in the outcome of 15 this matter. IN WITNESS WHEREOF, I have hereunto set my 16 17 hand on this 23rd day of August, 2024. 18 Debra A. Dibble 20 Fellow of the Academy of Professional Reporters Registered Diplomate Reporter 21 Certified Realtime Reporter Notary Public 11/17/2027 22 CA 14345 23 24 25

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Page 208
         I HEREBY CERTIFY that I have read
 2 this transcript of my deposition, and that
 3 this transcript accurately states the testimony
 4 given by me, with the changes or corrections, if
5 any, as noted.
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                  DEREK A. KING, M.S., P.E.
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1	ERRATA SHEET FOR THE TRANSCRIPT OF:	Page 2	09
2	CASE NAME: Wadsworth v Walmart		
3	DEP DATE: August 19, 2024		
4	DEPONENT: DEREK A. KING, M.S., P.E.		
5	Pg. Ln. Now Reads Should Read Reason		
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